



VALIDATION REPORT

N.SERVE ENVIRONMENTAL SERVICES GMBH

Fatima N₂O Abatement Project

Report No: GM-MY-VAL-11/013 <11/373>

Date: 2012-03-29

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Validation Report:	Report No.	Rev. No.	Date of 1st issue:	Date of this rev.
	GM-MY-VAL 11/013 <11/373> V01	1.0	2011-11-30	2012-03-29
Project:	Title:	Initial PDD Version:	Final PDD Version	
	Fatima N ₂ O Abatement Project	2011-07-28 / V 01	2012-03-13 / V02.2 (minor changes after 2 nd incomplete notification)	
Client:	N.serve Environmental Services GmbH	Client ref:	Mr. Von Ruffer Albrecht	
Project Participant(s):	Host Party:	Other involved parties:		
	Fatima Fertilizer Company Limited	N.serve Environmental Services GmbH, Germany		
Applied methodology/ies:	Title:	No.:	Scope / TA:	
	N ₂ O abatement from nitric acid production	ACM0019 Ver 01.0.0	5 / 5.1	
Validation team / Technical Review and Final Approval	Validation Team:	Technical review:	Final approval:	
	Cheong, Chun Yuen (TL) Abidin, Irawan (TE) Ma Paa Puratchikkanal	Walter, Ulrich Emilio Martin	Schubert, Jochen	
Expected Emission reductions: [t CO₂e]	Expected emission reductions over the 10 years crediting period:		(Expected) crediting period starting date:	
	4,581,135t CO ₂ e		2011-12-01	
Confidential content:	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
Summary of Validation Opinion:	<input checked="" type="checkbox"/> Positive validation opinion		<input type="checkbox"/> Negative validation opinion	
	<p>N.serve Environmental Services GmbH has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the project: "Fatima N₂O Abatement Project" with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board</p> <p>In the course of the validation 14 Corrective Action Requests (CARs), 3 Clarification Requests (CLs) were raised and closed out. 1 Forward Action Request (FAR) was raised that will be checked by verifying DOE during the 1st verification.</p> <p>The review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.</p> <p>In detail the conclusions can be summarised as follows:</p> <ul style="list-style-type: none"> - The project is in line with all relevant host country criteria Pakistan and all relevant UNFCCC requirements for CDM. Project activity approval have been obtained from DNA of Pakistan vide the Letter of Approval (HCA) dated 2011-10-07 and by Environment Agency from UK's DNA, dated 2011-11-16. - The project additionality is sufficiently justified in the PDD. - The monitoring plan is transparent and adequate. - The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 4,581,135tCO₂e are most likely to be achieved within the 10 years crediting period. <p>The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation.</p>			



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	2012-01-27 Fatima FVR_after incomplete.docx	115

Abbreviations

BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO₂	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
DNA	Designated National Authority
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change
PDD	Project Design Document
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

Table of Contents	Page
1 OBJECTIVE / SCOPE	6
2 GHG PROJECT DESCRIPTION.....	7
2.1 Project Characteristics	7
2.2 Involved Parties and Project Participants	7
2.3 Project Location	7
2.4 Technical Project Description	8
3 METHODOLOGY AND VALIDATION SEQUENCE.....	9
3.1 Validation Steps	9
3.2 Contract review	9
3.3 Appointment of team members and technical reviewers	10
3.4 Consideration of Public Stakeholder Comments	11
3.5 Validation Protocol	11
3.6 Review of Documents	12
3.7 Follow-up Interviews	12
3.8 Project comparison	13
3.9 Resolution of Clarification and Corrective Action Requests	13
3.9.1 Definition	13
3.9.2 Draft Validation	14
3.9.3 Final Validation	14
3.10 Technical review	14
3.11 Final approval	14
4 VALIDATION FINDINGS	15
5 VALIDATION ASSESSMENT SUMMARY	33
5.1 General Description of the Project Activity	33
5.1.1 Participation	33
5.1.2 Contribution to Sustainable Development	34
5.1.3 PDD editorial Aspects	34
5.1.4 Technology to be employed.	34
5.1.5 Small Scale Projects	35
5.2 Project Baseline, Additionality and Monitoring Plan	35
5.2.1 Application of the Methodology	35
5.2.2 Project Boundary	36
5.2.3 Baseline Identification	36
5.2.4 Calculation of GHG Emission Reductions	37
5.2.5 Additionality Determination	39
5.2.6 Monitoring Methodology	40
5.2.7 Monitoring Plan	42
5.2.8 Project Management Planning	42



5.2.9	Crediting Period	43
5.2.10	Environmental Impacts	43
5.2.11	Comments by Local Stakeholders	44
6	VALIDATION OPINION	45
7	REFERENCES	46
	ANNEX 1: VALIDATION PROTOCOL.....	52
	ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION.....	110
	ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS.....	111
	ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS	112
	ANNEX 5: OUTCOME OF THE GSCP	113
	ANNEX 6: STATEMENTS OF COMPETENCE OF TEAM MEMBERS	114

1 OBJECTIVE / SCOPE

The purpose of a validation is to have an independent third party assess the project design. In particular the project's baseline, the monitoring plan (MP), and the project's compliance with

- the requirements of Article 12 of the Kyoto Protocol;
- the CDM modalities and procedures as agreed in the Marrakech Accords under decision 3/CMP.1
- the annex to the decision;
- subsequent decisions made by COP/MOP & CDM Executive Board and
- other relevant rules, including the host country legislation and sustainability criteria

are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders on the quality of the project and its intended generation of certified emission reductions (CERs).

The validation scope is given as a thorough independent and objective assessment of the project design including especially: the correct application of the methodology, the project's baseline study, additionality justification, local stakeholder commenting process, environmental impacts and monitoring plan, which are included in the PDD and other relevant supporting documents, to ensure that the proposed CDM project activity meets all relevant and applicable CDM criteria.

The information included in the PDD and the supporting documents were reviewed against the requirements as set out by the UNFCCC. The validation team has, based on the requirements in the Validation and Verification Manual^{VVM}, carried out a full assessment of all evidences to assess the compliance of the project with the key areas as outlined in section V.E. and V.F. of the VVM (version 01.2, EB 55).

The validation is based on the information made available to TÜV NORD JI/CDM CP and on the contract conditions. TÜV NORD JI/CDM CP cannot be held liable by any entity for making its validation opinion based on any false or misleading information supplied to it during the course of validation.

The validation is not meant to provide any consulting to the project participants. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

2 GHG PROJECT DESCRIPTION

2.1 Project Characteristics

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

Table 2-1: Project Characteristics

Item	Data
Project title	Fatima N ₂ O Abatement Project
Project size	<input checked="" type="checkbox"/> Large Scale <input type="checkbox"/> Small Scale
Project Scope (according to UNFCCC sectoral scope numbers for CDM)	<input type="checkbox"/> 1 Energy Industries (renewable- /non-renewable sources)
	<input type="checkbox"/> 2 Energy distribution
	<input type="checkbox"/> 3 Energy demand
	<input type="checkbox"/> 4 Manufacturing industries
	<input checked="" type="checkbox"/> 5 Chemical industry
	<input type="checkbox"/> 6 Construction
	<input type="checkbox"/> 7 Transport
	<input type="checkbox"/> 8 Mining/Mineral production
	<input type="checkbox"/> 9 Metal production
	<input type="checkbox"/> 10 Fugitive emissions from fuels (solid, oil and gas)
	<input type="checkbox"/> 11 Fugitive emissions from production and consumption of halocarbons and hexafluoride
	<input type="checkbox"/> 12 Solvents use
	<input type="checkbox"/> 13 Waste handling and disposal
	<input type="checkbox"/> 14 Afforestation and Reforestation
	<input type="checkbox"/> 15 Agriculture
Applied Methodology	ACM0019 V 01.0.0: N ₂ O abatement from nitric acid production
Technical Area(s)	5.1 / Chemical Industry
Crediting period	<input type="checkbox"/> Renewable Crediting Period (7 y) <input checked="" type="checkbox"/> Fixed Crediting Period (10 y)
Start of crediting period	2011-12-01

2.2 Involved Parties and Project Participants

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

Table 2-2: Project Parties and project participants

Characteristic	Party	Project Participant
Host party	Pakistan	Fatima Fertilizer Company Limited
Other involved party/ies	United Kingdom of Great Britain and Northern Ireland	1. N.serve Environmental Services GmbH 2. Fatima Fertilizer Company Limited

2.3 Project Location

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

Table 2-3: Project Location

No.	Project Location
Host Country	Pakistan
Region:	Sadiqabad, District Rahim Yar Khan
Project location address:	United Sugar Mill Road, Mukhtar Garh
Latitude:	28° 15.749' N
Longitude:	70° 1.895' E

2.4 Technical Project Description

The Project activity entails the installation of:

1. Tertiary N₂O abatement technology
2. Installed specialised monitoring equipment at the tail gas stack

The N₂O abatement technology will be installed at the tail gas downstream after the HNO₃ absorber and before the tail gas stack

A tertiary catalyst reduces N₂O that is formed in the primary ammonia oxidation reaction. A wide range of metals (e.g. Cu, Fe, Mn, Co and Ni) have shown to be of varied efficiency in N₂O abatement catalysts.

The technical key data are provided in table 2-4 below

Table 2-4: Technical data of the project activity ^{/C2/C5/}

Parameter	Unit	Value
Plant Load Capacity (Nitric Acid Output)	tHNO ₃ /d	1,500
Tail gas design flow rate	Nm ³ /h	193,000
Tail gas max. flow rate	Nm ³ /h	200,000
Max. Inlet N ₂ O concentration	ppm	2,000
Operating Days per year	d	330
Expected Abatement Efficiency	%	98
Guaranteed Abatement Efficiency	%	94

3 METHODOLOGY AND VALIDATION SEQUENCE

3.1 Validation Steps

The validation of the project consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the project design document (PDD)
- Desk review of the PDD and supporting documents
- Validation planning
- On-Site assessment
- Background investigation and follow-up interviews with personnel of the project developer and its contractors
- Draft validation reporting
- Resolution of corrective actions (if any)
- Final validation reporting
- Technical review
- Final approval of the validation

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

Table 3.1: Validation sequence

Topic	Time
Assignment of validation	2011-07-17
Submission of PDD for global stakeholder commenting process	2011-07-30
On-site visit	2011-08-26 to 2011-08-28
Draft reporting finalised	2011-08-30
Final reporting finalised	2011-11-29
Technical review on final reporting finalised	2011-11-30
Corrections after "Incomplete" notification received on 2012-01-09 finalised	2012-01-27
Corrections after "Incomplete" notification received on 2012-03-12 finalised	2012-03-29

3.2 Contract review

To assure that

- the project falls within the scopes for which accreditation is held,



- the necessary competences to carry out the validation can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

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

3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities, a validation team, consisting of one team leader and 1 additional team member, as well as the Technical Review personnel were appointed.

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

Table 3-2: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Host country Competence	Team Leading Competence	On-site Visit
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Cheong, Chun YUen	TUV NORD Malaysia	TL ^{A)}	LA	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Abidin, Irawan	TUV NORD CERT GmbH	TE ^{A)}	TE	<input checked="" type="checkbox"/>	5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Ma Paa Puratchikkanal	TN India	TM ^{A)}	SA	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Emilio Martin	TUV NORD CERT GmbH	TR ^{B)}	LA	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Walter, Ulrich	TUV NORD CERT GmbH	TR ^{B)}	A	<input checked="" type="checkbox"/>	5.1	<input type="checkbox"/>	<input type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Schubert, Jochen	TUV NORD CERT GmbH	FA ^{B)}	SA	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	-

¹⁾ TL: Team Leader; TM: Team Member; TR: Technical review; OT: Observer-Team; OR: Observer-TR; FA: Final approval

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

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

^{A)} Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

^{B)} No team member

All team members contributed to the review of documents, the assessment of the project activity and to the preparation of this report under the leadership of the team leader.

Technical Experts contributed to the assessment of special aspects of the project activity, e.g. technical or host country aspects.

In order to qualify further personnel the project team was accompanied by observers and/or trainees as indicated in the table above. They are usually not considered as team members.

Statements of competence for the above mentioned team members are enclosed in annex 6 of this report.

3.4 Consideration of Public Stakeholder Comments

Acc. to the modalities and procedures the draft PDD, as received from the project participants, has been made publicly available on the dedicated UNFCCC CDM website prior to the validation activity commenced. Stakeholders have been invited to comment on the PDD within the 30 days public commenting period.

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

3.5 Validation Protocol

In order to ensure consideration of all relevant assessment criteria, a validation protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of validation and the results from pre-validating the identified criteria. The validation protocol reflects the generic CDM requirements each CDM project has to meet as well as project specific issues as applicable. The validation protocol serves the following purposes:

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

The validation protocol is described in Figure 1.

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

Figure 1: Validation protocol table

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

3.6 Review of Documents

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

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

3.7 Follow-up Interviews

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

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

Table 3-3: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Fatima Fertilizer Company Limited, Mr. Arif-Ur-Rehman Mr. Syed Hussain Iman Bukhari Mr. Mahmood Ali Mr. Muhammad Nabeel Shakir Mr. Shahzad Mehdi Mr. Ali Qureshi	<ul style="list-style-type: none"> - Chronological description of the project activity with documents of key steps of the implementation. - Current status of project design - Technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project

Interviewed Persons / Entities	Interview topics
Mr. Nadeem Shah Mr. M. Farooq Mr. Gulam Murlazu Mr. Mohammed Nasir N.serve Environmental Services GmbH Mr. Martin Stilkenbaeumer Mr. Wolfgang Bruckner Engineering Industrial Supplies Mr. Javed E. Mir	<ul style="list-style-type: none"> - Host Government Approval - Approval procedures and status - Monitoring and measurement equipment and system. - Financial aspects - Crediting period - Project activity starting date - CER allocation / ownership - Baseline study assumptions - Additionality - Sustainable development issues - Monitoring - Analysis of local stakeholder consultation - Roles & responsibilities of the project participants w.r.t. project management, monitoring and reporting - National Legislation - Editorial issues of the PDD

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

3.8 Project comparison

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

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

3.9 Resolution of Clarification and Corrective Action Requests

3.9.1 Definition

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

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

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

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

3.9.2 Draft Validation

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

3.9.3 Final Validation

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

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

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

3.10 Technical review

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

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

3.11 Final approval

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

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

4 VALIDATION FINDINGS

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

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

Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
General description of project activity (A) - Project specification - Technical project description - Participation - Contribution to sustainable development - PDD editorial aspects - Technology to be employed	4	-	-
Project Baseline, Additionality and Monitoring Plan (B) - Application of the Methodology - Project Boundary - Baseline identification - Calculation of GHG emission reductions Project emissions Baseline emissions Leakage - Additionality determination - Monitoring Methodology - Monitoring Plan - Project management planning	10	1	1
Duration of the Project / Crediting Period (C)	-	1	-
Environmental impacts (D)	-	1	-
Stakeholder Comments (E)	-	-	-
SUM	14	3	1

¹⁾ The letters in brackets refer to the validation protocol

Table 4-2: PDD versions used for assessments

Version Nr.	Assessment Round
PDD v. 01 (Published)	Initial assessment and rising of Findings
PDD v. 02	DOE Assessment #1



Version Nr.	Assessment Round
PDD v. 02.1	DOE Assessment #2. Revision due to Incompleteness during submission for registration

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

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

General:	A1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The Annex I LoA and MoC have not been submitted.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The Annex I LoA and the MoC have been submitted to the DOE.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The MoC submitted dated 2011-06-24 indicates the names of project participants in host and Annex I countries are same as in Section A.3 and Annex I of PDD</p> <p>Annex I Letter of Approvals dated 2011-11-16 has been submitted. The LoAs were issued by Environment Agency, UK's DNA.</p> <p>LoA reference EA/FFCLtd/01/2011 was issued to Fatima Fertilizer Company Limited</p> <p>LoA reference EA/NSES/01/2011 was issued to N.serve Environmental Services GmbH</p> <p>The LoAs mention following:</p> <ol style="list-style-type: none"> 1. United Kingdom ratified Kyoto Protocol on 2002-05-31 2. UK participates voluntarily in CDM 3. Authorised N.serve Environmental Services GmbH's participation in the project activity 4. Authorised Fatima Fertilizer Company Limited's participation in the project activity <p>The LoAs have not unconditional requirements.</p> <p>The name of the DNA was cross checked with UNFCCC website and confirmed correct.</p> <p>CAR is CLOSED</p>		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

General:	A2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD Version 01, Section A.4.1.4: The geographical coordinate's representation is incorrect.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The geographical data has been adapted to 28,2732 N, 70,0396 E. Additionally, a sign has been placed on the snap shot representing the entrance gate to the Fatima nitric acid plant.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PDD Version 02, Section A.4.1.4: The coordinates had been updated with correct representation. CAR is CLOSED.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

General:	A3		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD Version 01: 1. There are several clerical error need to be corrected 2. The several dates format are not in accordance to the PDD guidelines 3. Section B.8 did not include details of the entities, persons and no confirmation whether they are project participants.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. The PDD was checked for clerical errors. 2. The date format has been adapted to DD/MM/YYYY as required by CDM rules. 3. Entities, persons and a statement regarding project participants have been included to the section		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PDD Version 02 had been updated and corrected for all the above findings on clerical errors, data format and Section B.8. CAR is CLOSED.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		



General:	A4		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD Version 01 Section A.4.3: The technology applied in the project activity was not described clearly.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	A table with design parameter and permissible operating conditions of the tertiary catalyst system has been included into the section of the PDD.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PDD version 02 Section A.4.3 had been updated with a table on the technical parameter of the equipment applied. CAR is CLOSED.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Project Baseline, Additionality and Monitoring Plan	B1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD Version 01 Section B.3: The definition of the project boundary is not in accordance with the methodology.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The project boundary has been adapted in accordance with the methodology.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PDD version 02 Section B.3 the project boundary has been revised in accordance to methodology. PDD Version 01 did not include a description of the project boundary. The updated PDD version 02 include a description as follows; The project boundary is the nitric acid plant facilities and equipment for production process from the inlet of the ammonia burner to the outlet of the tail gas section where the N ₂ O abatement system will be installed. This was cross checked by the validation team during the onsite visit. The description is in accordance with the methodology. CAR is CLOSED.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Project Baseline, Additionality and Monitoring Plan	B2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD Version 01 Section B.4: The baseline scenario of the project activity was not described according to the methodology		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The section has been adapted as follows:</p> <p>“The Environmental Protection Agency Govt. of Pakistan is responsible of any national emission regulations. There are currently no national regulations in Pakistan that limit N₂O emissions from nitric acid production. In the absence of regulations requiring the abatement of N₂O emissions, the operator of the nitric acid plant has no economic incentives to take any N₂O abatement measures because this entails capital and operating costs but no financial benefits. Therefore, the CDM project activity is considered additional and the baseline scenario is that the N₂O is emitted to the atmosphere with no N₂O abatement measure being implemented.”</p>		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>PDD version 02 Section B.4 has been revised and described in accordance to the methodology baseline scenario. CAR is CLOSED.</p>		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Project Baseline, Additionality and Monitoring Plan	B3		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD Version 01 Section B.5: There is no description for additionality in accordance to the methodology.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The following has been included to the section:</p> <p>“According to the baseline methodology procedure of the methodology ACM0019 Version 1.0.0, the project activity is considered to be additional in the absence of regulations requiring the abatement of N₂O emissions. The operator of the nitric acid plant has no economic incentives to take any N₂O abatement measure because this entails capital and operation costs but no financial benefits. In the absence of any regulation, the baseline scenario is emitting N₂O to the atmosphere with no N₂O abatement measure being implemented.”</p>		



Project Baseline, Additionality and Monitoring Plan	B3		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PDD version 02 section B.5 has been revised to include the description of additionality in accordance to the methodology. CAR is CLOSED.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Project Baseline, Additionality and Monitoring Plan	B4		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD version 01 Section B.5: The project start date was not indicated and was not according to Glossary of CDM terms as reported in Section C.1.1.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The project start date in section B.5. has been revised in accordance with the CDM Glossary.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PDD version 02 sections B.5 has include the project start date in the table list of e-mail exchange provides evidence for such real and continuous action and Section C.1.1 has been updated with the correct date of the start date which refers to the purchase contract with Uhde GmbH. Therefore in compliance with Glossary of CDM Terms. CAR is CLOSED		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Project Baseline, Additionality and Monitoring Plan	B5		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD Version 01 Section B.5: The CDM prior consideration was not demonstrated		



Project Baseline, Additionality and Monitoring Plan	B5
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>A detailed list of evidence has been included to the PDD describing the continuous examination of CDM eligibility since a point in time before the project start date on 26.10.2007.</p>
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>PDD version 02, section B.5 has been updated with a table demonstrating the history of events. The validation team has reviewed the submitted documents on the history of events especially the submission for methodology revision and clarification.</p> <p>It was evidenced that the list of events confirm that continuous and real actions were taken and there is no gap of more than 2 years between each event.</p> <p>The 1st real action taken was an email communication with Cargill dated 2006-09-20 regarding CERs for the nitric acid plant.</p> <p>Subsequent emails communication with Mitsubishi, Uhde and Thyssen Krupp between October 2006 to January 2007.</p> <p>In January 2007, discussion on the applicability of the revised methodology AM0028 since the complex was a relocated facility from United Kingdom, instead of an existing plant.</p> <p>The discussion with Mitsubishi on the meth revision continues from 2007-01-11 till 2008-05-06 when the 1st meth revision was submitted to UNFCCC.</p> <p>The revision to methodology was rejected on 2008-06-27</p> <p>The Board of Directors resolution on 2008-08-22 and made a decision to go ahead to seek CDM status for the project.</p> <p>The 2nd meth revision was submitted on 2008-09-19 and was again rejected on 2009-05-08</p> <p>A 3rd round was submitted on 2009-07-28 and rejected on 2009-09-19.</p> <p>From 2009-09-19 to 2010-11-19, the PP continues to pursue in other approach and submit an appeal letter to the EB dated 2010-11-16.</p> <p>On 2011-03-15, received news from the Uhde, equipment supplier a new methodology will be developed. And on 2011-05-02, N.serve announces that the new methodology applicable to the project activity</p> <p>From the series correspondence and submission for methodology revision, proved the serious actions taken by the project owner is continuous to secure CDM status for the project.</p> <p>Although the time taken to submit the project documentation for starting the validation process is more than 5 years, however, the action taken by the project activity owner has been continuous (with no gaps between actions longer than 3 years) and serious in pursuing CDM status for the project. Therefore, it can be concluded the actions are real to secure CDM status.</p> <p>The validation team considers that the project complies with CDM prior consideration in accordance to EB 62 Annex 13 paragraphs 6 & 7.</p> <p>CAR is CLOSED.</p>



Project Baseline, Additionality and Monitoring Plan	B5
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	B6
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>PDD Version 01 Section B.6.1: The determinations of project emissions were not demonstrated and explained according to the methodology.</p> <ol style="list-style-type: none"> 1. <i>Project emissions of N₂O from the project plant ($PE_{N_2O,n}$).</i> 2. <i>Determination of $Q_{N_2O, tail\ gas,n}$.</i> 3. <i>Determination of $Q_{N_2O, by-pass,n}$.</i> 4. <i>Project emissions from the operation of the tertiary N₂O abatement facility ($PE_{CO_2, tertiary,n}$).</i>

Project Baseline, Additionality and Monitoring Plan	B6
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>1. The demonstration and explanation of $PE_{N_2O,n}$ has been updated in PDD in accordance with the "Tool to determine the mass flow of a greenhouse gas in a gaseous stream" (Version 02.0.0) as required by the methodology.</p> <p>2. The demonstration and explanation of $Q_{N_2O,tail\ gas,n}$ has been updated in PDD in accordance with the ACM0019.</p> <p>3. The demonstration and explanation of $Q_{N_2O,by-pass,n}$ has been updated in PDD in accordance with ACM0019. However, at the current point of time no by-pass is foreseen in the project design of the project activity. Nevertheless. It will be monitored throughout the crediting period, whether a by-pass valve will be installed or not. The parameter "$T_{open,n}$" measures the Fraction of time in monitoring period n during which the by-pass valve on the line feeding the tertiary N₂O abatement facility was open to vent the gas directly to the atmosphere. It has been introduced to section 7.1 for the monitoring plan. For the ex-ante calculation at the time of validation the parameter has been introduced to section 6.2 and is set to be "0".</p> <p>4. The demonstration and explanation of $PE_{CO_2,tertiary,n}$ has been updated in PDD in accordance with the "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion" (version 2.0) as required by the methodology.</p> <p>The improvement comes along with a change of the calculation method from Option B to Option A as provided by the tool, due to the availability of detailed data of the gas composition for the operation of the tertiary abatement system in the project campaigns. Furthermore, Option A of the tool is declared to be the favorable calculation method. The lower $PE_{CO_2,tertiary,n}$ is explicable due to a mistake in the calculation of the parameter $COEF_{i,n}$ (CO₂ emission coefficient of fuel type i in monitoring period n (tCO₂/mass or volume unit) in the GSC-PDD. This lead to the erroneous assumption that CH₄ was emitted to the atmosphere from the operation of the tertiary abatement system. Instead, natural gas is combusted and turned into CO₂, which is then released with the tail gas. The correct factor for $COEF_{i,n}$ is now calculated leading to a more realistic ex-ante estimation of $PE_{CO_2,tertiary,n}$.</p>

Project Baseline, Additionality and Monitoring Plan	B6
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>PDD version 02, Section B.6.1 had been updated in accordance with the respective tool and the methodology for the findings raise above on project emissions.</p> <p>The following have been updated:</p> <ol style="list-style-type: none"> 1. Project emissions PE_{N₂O,n} in accordance to the Tool to determine mass flow of a greenhouse gas in gaseous stream version 0.2.0.0 2. Q_{N₂O,tail gas,n} is in accordance to applied methodology 3. Q_{N₂O,by-pass,n} is in accordance to applied methodology 4. PE_{CO₂,tertiary,n} is in accordance to the "Tool to calculate project of leakage CO₂ emissions from fossil fuel combustion version 2.0. The PP has changed from Option B to Option A in order to determine the Project Emissions caused by the combustion of the natural used in the tertiary abatement system. When natural gas is combusted, CO₂ is released together with the tail gas. Therefore, the CO₂ emission factor calculated is based on the chemical composition of the fossil fuel type / to determine the ex-ante value of PE_{CO₂,tertiary,n}, which is preferred by the applied methodology. Moreover, the ex-ante value reported for this parameters in the final version of the PDD is lower than in the version uploaded for the GSC because of a wrong value used for the emission factor. The emission factor, which now correctly refers to CO₂ and not to CH₄, which has a 21 times higher GWP than CO₂, is calculated with option A as per the applied methodological tool.. <p>CAR is CLOSED</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	B7
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>PDD version 01 Section B.6.3:</p> <ol style="list-style-type: none"> 1. ER calculation spreadsheet did not indicate the source of the data applied in both calculations and catalyst assumption tabs. 2. The formulae applied are not indicated
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<ol style="list-style-type: none"> 1. The calculation spreadsheet has been adapted. Sources of external data have been added in table "captions & data sources" 2. Applied formulas have been added to the sheet

Project Baseline, Additionality and Monitoring Plan	B7
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>PDD Version 02:</p> <ol style="list-style-type: none"> The ER spreadsheets have been updated with a tab for sources of data. <ol style="list-style-type: none"> The reference for the M_{CH₄} and M_{N₂O} are from an online gas encyclopaedia widely used by chemical engineers to obtain relevant data for various industries application The other sources are IPCC default values, the relevant tools, applied methodology, suppliers specifications and plant design capacity. The applied formulae have been included in the updated version of the spreadsheet for: <ol style="list-style-type: none"> ER / BL tab include the baseline emissions and project emissions formulae are according to applied methodology Project emissions tab formula for N₂O is according to the tool. Project emissions tab formula for N₂O tertiary is according to tool <p>CAR is CLOSED.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	B8
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD version 01 Section B.6.2: There are several parameters not demonstrated with regard to the fuel as required by the "Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion".
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The following parameter as required by the "Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion" have been added to the section: <ul style="list-style-type: none"> NCV_{i,j} EF_{CO₂,i,y}
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PDD Version 02 Section B.6.3 has been revised to include the parameters NCV _{i,j} and EF _{CO₂,i,y} and therefore in accordance to the tool. CAR is CLOSED.



Project Baseline, Additionality and Monitoring Plan	B8
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	B9
Classification	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>PDD version 01 Section B.6.3; The PP is requested to substantiate the following:</p> <ol style="list-style-type: none"> 1. Assumption of 1,500 t/d is based on 100% and should be explained 2. Annual operating days of 330 3. Reduction efficiency of 98%. 4. The 11,045 tCO₂e estimation for the operation of the tertiary system

Project Baseline, Additionality and Monitoring Plan	B9
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>1. The assumption has been explained in footnote 1 as follows: “The amounts of nitric acid mentioned here and forthcoming are calculated at 100 percent of nitric acid concentration to ensure comparability of the data as the actual concentration of the weak nitric acid produced may vary during the production campaigns.”</p> <p>2. The assumption has been explained in footnote 6 of the PDD “A design production campaign of 330 days/y is assumed according to statements of the plant’s operator provided a factual downstream demand for the produced nitric acid. However, 25 days/y are designated for regular maintenance work, while further 10 days/y of plant downtime are considered for any unforeseeable event. However, the actual uptime of the plant will be monitored during the production campaigns and can thus significantly deviate from the above assumptions.”</p> <p>3. The reduction efficiency has been explained in footnote 12 of the PDD: “The reduction efficiency of 98% is to be considered an expected N₂O-abatement efficiency of the tertiary catalyst as provided in the technical description of the catalysts’ manufacturer. It differs from the guaranteed value, which is 94%. The technical description was provided to the DOE during on-site visit and for TR called ‘<i>Contract_ENVINOX_UHDE</i>’. The relevant information can be found in Annex 1 on page 6 of the above mentioned document.</p> <p>4. The project emissions have been recalculated according to the “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion” (version 2.0) and the fossil fuel consumption data of the tertiary abatement system provided by Uhde. The annual project emissions stemming from the operation of the catalyst (PE_{CO₂,tertiary,n}) are expected to amount to 1,213 tCO₂e. The underlying calculations are attached (‘<i>ER_Calculation_Fatima_v4</i>’) and provided to the DOE for review.</p> <p>Section 6.3 has been amended as follows: For the purpose of estimating the complete project emissions, an ex-ante calculation was undertaken on the basis of design consumption figures provided by Uhde. The catalyst system will be fed with natural gas providing CH₄, which will be utilized as a reduction agent for the decomposition of N₂O in a quantity of 0.35 mol CH₄/1 mol N₂O. Formula (11) is applied for the determination of the parameter PE_{FC,i,j}, which is equal to parameter PE_{CO₂,tertiary,n} of the applied methodology ACM0019 resulting in estimated emissions from the operation of the tertiary abatement facility of 1,213 tCO₂</p>



Project Baseline, Additionality and Monitoring Plan	B9
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>PDD version 02 section B.6.3, the PP had updated the PDD and provide the respective documents in support of the findings raised.</p> <ol style="list-style-type: none"> 1. Footnote 1 has been included in revised PDD explaining the concentration of nitric acid is 100% 2. The plant operation days of 330 are determined after deducting annual regular maintenance of 25 days and unforeseen shutdown of 10 days, which is deemed as reasonable as per the expertise of the validation team. 3. The reduction efficiency has been corrected according to the catalyst manufacturer specification. ^{/C5/} 4. The project emissions have been recalculated taking into account the usage of natural gas. The revised ER spreadsheet has been checked and deemed as correct. ^{/F6/} <p>CL is CLOSED.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<p> <input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements </p>

Project Baseline, Additionality and Monitoring Plan	B10
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>PDD version 01 Section B.7.1: Correction requested for several parameters that were not monitored in accordance to methodology and tools applied.</p>

Project Baseline, Additionality and Monitoring Plan	B10
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Correction in accordance with the</p> <ul style="list-style-type: none"> • “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion” (version 2.0) and • “Tool to determine the mass flow of a greenhouse gas in a gaseous stream” (Version 02.0.0) <p>have been applied to parameters in section B.7.1 of the PDD as described below: PDD version 02 Section B.7.1: The following monitoring parameters required by the respective tools or methodology have been included or amended.</p> <ol style="list-style-type: none"> 1. Approved consolidated baseline and monitoring methodology ACM0019 “N₂O abatement from nitric acid production” v. 01.0.0” $P_{NA,n}$ 2. “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion” (version 2.0) and $FC_{i,j,y}$, $EF_{CO_2, i, n}$, $NCV_{i,j}$ 3. “Tool to determine the mass flow of a greenhouse gas in a gaseous stream” (Version 02.0.0) $V_{t,wb}$, $V_{i,t,wb}$, T_t, P_t
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>PDD version 02 Section B.7.1: The following monitoring parameters required by the respective tools have been updated with relevant information.</p> <ol style="list-style-type: none"> 1. $P_{NA,n}$: The measurement method is included and QA/QC procedures have been improved. 2. $NCV_{i,j}$: Information for the source of data and monitoring frequency has been improved 3. $FC_{i,j,y}$: This parameter is added for monitoring of the fossil fuel combusted by the project activity 4. $EF_{CO_2, i, n}$: Information for the source of data, measurement and monitoring frequency has been improved. 5. T_t and P_t: Further explanation included in the comments column as regards to when the parameter will be monitored and applied based on the conditions of the monitoring process. 6. $V_{t,wb}$: Correction has been made to the data unit from dry to wet. <p>CAR has been re-opened after receiving Incomplete notification:</p> <ul style="list-style-type: none"> - After interview with the PP, Option B to calculate the project emissions from the use of fossil fuels in the tertiary abatement system as per the “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion” (version 2.0) is not intended to be used ex-post, instead option A is foreseen. Corrections in the PDD to reflect these changes are required.

Project Baseline, Additionality and Monitoring Plan	B10
	Correction in accordance with the "Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion" (version 2.0) as option A, instead of option B, is intended to be used in order to calculate the parameter PE _{CO₂,tertiary,n} . Furthermore, since option A does not require the monitoring of EF _{CO₂,i,n} , NCV _{i,j} , these have been deleted from section B.7.1
	<ol style="list-style-type: none"> 1. w_{C,i,y}: This parameter is added as a monitored data for project emissions which is a calculated value for the weighted average mass fraction of carbon. The parameter is in accordance to "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion" version 2.0 Option A. 2. EF_{CO₂,i,n} and NCV_{i,j} have been deleted from section B.7.1 as PDD version 2.1 now uses option A for calculating the project emissions from the use of fossil fuels in the abatement system <p>CAR has been closed out.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input checked="" type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	B11
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD version 01, Section B.7.2: There are no information on Data Management, Archiving and Storage.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Information on Data Management and Storage has been added to the section.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PDD version 02 Section B.7.2 has been updated to include information on data management and storage. It can be concluded it fulfils the requirements of UNFCCC. CAR is CLOSED
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements



Project Baseline, Additionality and Monitoring Plan	B12		
Classification	<input type="checkbox"/> CAR	<input type="checkbox"/> CL	<input checked="" type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD version 01 Section B.7.2: The monitoring procedures are not developed yet to monitor the project activity. This will be checked during the 1 st verification.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Monitoring procedures will be developed and applied during the monitoring period. It will be ready for check during the 1 st verification.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	This will be checked by the verifying DOE during the 1 st verification.		
Conclusion <i>Tick the appropriate checkbox</i>	<input checked="" type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements		

Duration of Project	C1		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD version 01 Section C.1.1: It is not clear how the project start was determined. Project starting date has to comply with the latest Glossary of CDM terms.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The project start has been revised to the date of signing the purchase contract for the EnviNOx system on 26/10/2007. The start date of the crediting period has been revised to 01/12/2011 or the date of the registration at UNFCCC whichever comes later.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>PDD version 02 Section C.1.1: The project start date has been revised from 2011-12-01 to 2007-10-26 which is the date of signing the purchase contract.</p> <p>Section C.2.1.1: The start date of the crediting period has been revised to 2011-12-01.</p> <p>Therefore CL is CLOSED</p>		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Environmental Impacts	D1		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PDD version 1.0, Section D.2: The PP is requested to clarify why an EIA is not required for the project activity.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>Fatima Fertilizer is a chemical complex comprising several production facilities such as:</p> <ol style="list-style-type: none"> 1. a Ammonia plant; 2. a Nitric Acid plant; 3. a Nitro Phosphate plant; 4. a Calcium Ammonia nitrate plant; 5. a NPK plant; 6. a Urea plant. <p>All of the manufacturing units are covered by on Environmental permit which has been issued for the entire complex on 18/08/2010.</p> <p>EIA number:</p> <p>NO.DD(EIA)/EPA/F-67/(EIA)/2007/218/562</p> <p>The <i>point 8</i> of the Environmental Approval (Operational Phase), issued by the Environment Protection Department (EPD) document is in reference to the description of the project (<i>point 1</i>). The ENVINOx Unit shall be treated as a part of the nitric acid plant with no impact on production capacity and hence it shall not alter the project as described in <i>point 1</i>. Therefore, <i>point 8</i> is not applicable on the ENVINOx installation.</p> <p>It is similar to revamps where numerous additions or subtractions can be made but keeping the effluents within NEQS. The EPD approval letter is required to ensure that effluents will be kept under NEQS limits and the ENVINOx will serve the same purpose even more efficiently</p> <p>Thus, an additional Environmental Impact Assessment only for the nitric acid plant is not required.</p>		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>PDD Version 02, Section D.2: The EIA approvals for construction and operation were approved by the Environmental Agency of Punjab that covers the entire complex that includes the nitric plant.</p> <p>According to the Operation Phase Environmental Approval point 1, it mentions the approval includes the nitric plant. Since the project activity is part of the nitric plant, there is no alteration to the plant capacity hence no approval is required.</p> <p>Therefore additional approval is not required. ^{/A2/}</p> <p>CL is CLOSED.</p>		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

5 VALIDATION ASSESSMENT SUMMARY

5.1 General Description of the Project Activity

5.1.1 Participation

LOA

The Letter of Approval for project activity titled “**Fatima N₂O Abatement Project**” is issued by the host country, Pakistan DNA, National Energy Conservation Center (ENERCON) dated 2011-10-07 and submitted by the project participant. ^{/B3/}

The host country approval states the following:

1. The project activity is in compliance with the national criteria
2. Confirms Pakistan has ratified Kyoto Protocol on 2005-01-11
3. Confirms Pakistan participates voluntarily in CDM
4. Confirms the project will contribute sustainable development in Pakistan

The approval was addressed to Fatima Fertilizer Company Limited as project participant in the project.

The Annex I Party Letter of Approval dated 2011-11-16 was issued by DNA of United Kingdom to N.serve Environmental Services GmbH and Fatima Fertilizer Company Limited has confirmed that they are project participants in the CDM project titled “**Fatima N₂O Abatement Project**”. The LoAs are submitted by the project participants.

The UK DNA confirms that:

1. the UK ratified the Kyoto Protocol on 2002-05-31;
2. the UK participates voluntarily in the CDM;
3. authorises N.serve Environmental Services GmbH as project participant in the above named CDM project.

The letter of approvals also states on the host Party confirmation that the project activity assists it in achieving sustainable development.

The authenticity of both HCA and LoAs are confirmed by the validation team by comparing the names of the DNAs with UNFCCC website and previous LoAs issued for projects validated by the DOE (TUV NORD Cert GmbH).

According to the regulation as set out in the CDM VVM, EB 55, Annex 1 §45 the following has to be validated by a DOE:

The DOE shall determine whether each letter confirms that:

- (a) The Party is a Party to the Kyoto Protocol;
- (b) Participation is voluntary;



(c) In the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country;

(d) It refers to the precise proposed CDM project activity title in the PDD being submitted for registration.

All this relevant aspects have been validated by TÜV NORD and no deviation was observed. Since the HCA indicates the approval / authorization of the entity of the host country, the validation team is convinced that the host country approval along with the confirmation letter is sufficient to confirm that the project complies with all relevant requirements applying to the validation of the requirements set out in CDM VVM, EB 55, Annex 1 §44.

Project Participants

The project participant from the host country is Fatima Fertilizer Company Limited who has been authorised by the Pakistan DNA, National Energy Conservation Center .^{/B3/}

N.serve Environmental Services GmbH and Fatima Fertilizer Company Limited are authorised as project participants to the mention project activity by Environment Agency UK DNA.^{/B9/}

The project participants listed in table of section A.3 of the PDD and this information is consistent with the contact details provided in Annex 1 of the PDD^{/PDD/}. No entities other than those approved as project participants are included in these sections of the PDD. All above information have been checked against the host country approval and UK LoA.

The validation team had further cross-checked with the Modalities of Communication (MoC) which states the two project participants that are same as the LoAs and section A.3 and Annex I of PDD.^{/B10B9/}

5.1.2 Contribution to Sustainable Development

In the letter of approval of the host Party^{/B3/}, it is confirmed that the proposed CDM project activity will contribute to the sustainable development in Pakistan.

The approval letter from annex I party^{/B9/} also states on the host Party confirmation that the project activity assists it in achieving sustainable development.

5.1.3 PDD editorial Aspects

The PDD of the project is based on the latest PDD Template (Version 03) dated 2006-07-28 approved at EB 25 meeting on 2006-07-21 and complies with the Guidelines for Completing the PDD (Version 07) dated 2008-08-02.^{/PDDT/}

5.1.4 Technology to be employed

The technology applied is described in Section A.4.3 of PDD. The Project activity entails the installation of a Tertiary N₂O abatement technology. A tertiary catalyst reduces N₂O that is formed in the primary ammonia oxidation reaction. A wide range

of metals (e.g. Cu, Fe, Mn, Co and Ni) have shown to be of varied efficiency in N₂O abatement catalysts.

The technology applied is not available in the host country and was imported from Germany. The description in the PDD is consistent with the purchase agreement signed with the supplier Uhde GmbH. ^{/B1/}

A physical site visit conducted on 2011-08-26 to 2011-08-28 to confirm that the description in the Section A.4.3 of PDD reflects the real situation of the proposed CDM project activity, the design parameters of the nitric acid plant and the N₂O abatement system specifications consistent. The project does not involve alteration of any existing installation or process as confirmed by the technical expert of the validation team.

5.1.5 Small Scale Projects

The project is a large scale and applies the ACM0019 Version 01.0.0 methodology.

5.2 Project Baseline, Additionality and Monitoring Plan

5.2.1 Application of the Methodology

The project applied the approved methodology ACM0019 – “N₂O abatement from nitric acid production”, Version 01.0.0 Scope 5 approved at EB 61 meeting.

The applied methodology version is available at UNFCCC website and valid from 2011-06-03 onwards:

<http://cdm.unfccc.int/methodologies/DB/LL9ZXJ30XFUU757WE6M3ZX0AS9NQEA>

The following latest version tools are applied:

- a. “Tool to determine the mass flow of a greenhouse gas in a gaseous stream”.
- b. “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion”.

The applied methodological tools are available at UNFCCC website of <http://cdm.unfccc.int/Reference/tools/index.html> respectively.

According to the applied methodology ACM0019:

- In the case that the nitric acid plant started commercial operation before the implementation of the CDM project activity, the project participants shall demonstrate that there was no secondary or tertiary abatement technology installed in the respective nitric acid plant;
- Continuous real-time measurements of the N₂O concentration and the total gas volume flow can be carried out in the tail gas stream after the abatement of N₂O emissions throughout the crediting period of the project activity;
- No law or regulation which mandates the complete or partial destruction of N₂O from nitric acid plants exists in the host country where the CDM project activity is implemented.

During the onsite visit and review of documentation it was confirmed that:

1. The nitric plant started operation in April 2010, with no secondary or tertiary abatement technology installed; ^{/onsite/A2/}
2. There is no law in the host country that mandates the destruction of N₂O completely or partially; ^{/X1/}
3. The employed technology will be provided with a continuous real-time measurement system of N₂O concentration and total gas volume flow. ^{/C4/}

5.2.2 Project Boundary

The project spatial boundary as stated in section A.4.1.4 of PDD is accordance to feasibility studies. At the time of the on-site assessment, the validation team was able to visit the project site to confirm the actual location with a handheld GPS unit and further check with “Google Earth” on the coordinates. ^{/ge/}

According to the applied methodology ACM0019, the spatial extent of the project boundary encompasses the facility and equipment for the nitric acid production process from the inlet of the ammonia burner to the outlet of the tail gas section. ^{/PDD/}

The project activity introduces tertiary N₂O abatement, any remaining N₂O emissions from the project plant and CO₂ emissions arising from the operation of the tertiary abatement system are included as project emissions in the project boundary

The justification of the sources and sinks of greenhouse gases of the baseline and project boundary are identified in section B.3 of the PDD.

Through observations of the physical site of the project, the validation team confirms that the project boundary is the facility and equipment for the nitric acid production process. The baseline emission source is N₂O emissions from the tail gas of the nitric acid production. There are no other emission sources which are impacted by the project and not addressed by the applied methodology.

The project emission sources are:

1. N₂O released through the tail gas of the project plant to the atmosphere in monitoring period *n*;
2. Fossil fuel input to the destruction facility and/or re-heater in monitoring period *n*.

Leakage source:

According to the methodology, any leakage emissions sources are deemed to be negligible.

5.2.3 Baseline Identification

The validation team confirms that the procedure contained in the methodology to identify the baseline scenario has been correctly applied, and the description of baseline identification in the PDD is transparent and verifiable.

The baseline scenario is that the N₂O is emitted to the atmosphere with no N₂O abatement measure being implemented.

There are no regulations in Pakistan, the host country that require the abatement of N₂O emissions.

Alternatives

According to paragraph 103 of the VVM^{VVM}, the applied methodology ACM0019 prescribes the identification of the baseline scenario which is in accordance to section II as described in Section B.4 of PDD.

5.2.4 Calculation of GHG Emission Reductions

The emission reduction calculation is conducted as per applied methodology ACM0019 and the methodological tools.

The emission reductions (ER_n) of the project activity are the difference between the baseline emissions (BE_n) and project emissions (PE_n) as follows:

$$ER_n = BE_n - PE_n$$

Where:

ER_n = Emission reductions in monitoring period *n* (tCO_{2e})

BE_n = Baseline emissions in monitoring period *n* (tCO_{2e})

PE_n = Project emissions in monitoring period *n* (tCO_{2e})

Baseline emission:

Baseline emissions are calculated as follows:

$$BE_n = P_{NA,n} * EF_{BL, N_2O,n} * GWP_{N_2O} * 10^{-3}$$

Where:

BE_n = Baseline emissions in monitoring period *n* (tCO_{2e})

P_{NA,n} = Nitric acid produced in the monitoring period *n* (tHNO₃)

EF_{BL,N₂O,n} = EF_{default,y}, Baseline N₂O emission factor for nitric acid production in the monitoring period *n* (kg N₂O / tHNO₃)

GWP_{N₂O} = Global Warming Potential of N₂O valid for the commitment period

When considering the whole crediting period,

$$\begin{aligned} BE_{10 \text{ years}} &= \sum_{y=1}^{10} 4,950,000 * EF_{\text{default},y} * 310 * 10^{-3} \\ &= 4,808,100 \text{ tCO}_{2e} \text{ (Expected total BE for 10 years crediting period)} \end{aligned}$$

Project emissions:

Project emissions include emissions of N₂O which have not been destroyed by the project activity and, in case of the installation of a tertiary N₂O abatement facility, CO₂ emissions resulting from the operation of the N₂O abatement facility:

Project emissions are calculated as follows:

$$PE_n = PE_{N_2O,n} + PE_{CO_2, \text{ tertiary},n}$$

Where:

$$PE_n = \text{Project emissions in monitoring period } n \text{ (tCO}_{2e}\text{)}$$

$$PE_{N_2O,n} = \text{Project emissions of N}_2\text{O from the project plant in monitoring period } n \text{ (t CO}_{2e}\text{)}$$

$$PE_{CO_2, \text{ tertiary},n} = \text{Project emissions of CO}_2 \text{ from the operation of the tertiary N}_2\text{O abatement facility in monitoring period } n \text{ (tCO}_2\text{)}$$

The result for the entire crediting period is as follows:

$$PE_{10 \text{ years}} = \sum_{y=1}^{10} (PE_{N_2O,y} + PE_{CO_2, \text{ tertiary},y}) = 214,830 + 12,135 = 226,965 \text{ tCO}_{2e}$$

Leakage:

According to the methodology ACM0019 any leakage emissions sources are deemed to be negligible

Emission reductions:

According to above information, the emission reductions of the project for each monitoring period is calculated as following:

$$ER_n = BE_n - PE_n$$

Considering the whole crediting period, the total amount of emission reductions estimated is = $4,808,100 - 226,965 = 4,581,135 \text{ tCO}_{2e}$

The validation has confirmed by cross-checking the emission reduction calculation sheets provided with all referenced data sources and the requirements of applied methodology and methodological tools that:

- a) All data sources and assumptions used by the project are listed and referenced in the PDD, calculations are correct and appropriate, and are applicable to the proposed CDM project activity and will result in a conservative estimate of the emission reductions;
- b) All documentation used by project participants as the basis for assumptions have been checked. Some sources of data are:
 - i) 2006 IPCC default values; /IPCC/
 - ii) Other available data
- c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
- d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;

All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD

5.2.5 Additionality Determination

Consideration of CDM in decision making (if project start before validation)

The project start date is before validation and defined as 2007-10-26 which is the date of the Purchase Contract with Uhde GmbH is taken as the earliest starting date according to the PDD and document review.^{/B1/} This date is considered as the earliest date for implementation or real action that is in line with the “Glossary of CDM Terms”.^{/GT/}

According to VVM EB 55 Annex 3 Version 1.2 §100 and EB 62 Annex 13, the DOE has to determine whether the project start date is on or after 2008-08-02 or an existing project with a start date before 2008-08-02. The project start date as describe above is on 2007-11-26 which is before 2008-08-02. At the time of project activity start, there are no requirements to notify the DNA and/or EB.

The table in section B.5 of PDD “list of e-mail exchange provides evidence for such real and continuous action” provides a detail timelines on the chronicle events for CDM consideration of the project. A summary as below:

- The 1st real action taken was an email communication with Cargill dated 2006-09-20 regarding CERs for the nitric acid plant.
- Subsequent emails communication with Mitsubishi, Uhde and Thyssen Krupp between October 2006 to January 2007.
- In January 2007, discussion on the applicability of the revised methodology AM0028 since the complex was a relocated facility from United Kingdom, instead of an existing plant.
- The discussion with Mitsubishi on the meth revision continues from 2007-01-11 till 2008-05-06 when the 1st meth revision was submitted to UNFCCC.
- The revision to methodology was rejected on 2008-06-27
- The Board of Directors resolution on 2008-08-22 and made a decision to go ahead to seek CDM status for the project.
- The 2nd meth revision was submitted on 2008-09-19 and was again rejected on 2009-05-08
- A 3rd round was submitted on 2009-07-28 and rejected on 2009-09-19.
- From 2009-09-19 to 2010-11-19, the PP continues to pursue in other approach and submit an appeal letter to the EB dated 2010-11-16.
- On 2011-03-15, received news from the Uhde, equipment supplier a new methodology will be developed. And on 2011-05-02, N.serve announces that the new methodology is applicable to the project activity

From the correspondences and submissions for methodology revisions, it is proved that serious and continuous actions were taken by the project owner in order to secure CDM status for the project.

Although the time taken to submit the project documentation for starting the validation process is more than 5 years, however, the action taken by the project activity owner has been continuous (with no gaps between actions longer than 3 years) and serious in pursuing CDM status for the project. Therefore, it can be concluded the actions are real to secure CDM status.

The validation team considers that the project complies with CDM prior consideration in accordance to EB 62 Annex 13 paragraphs 6 & 7

Investment analysis

In accordance to the methodology, in the absence of regulations requiring the abatement of N₂O emissions, the operator of the nitric acid plant has no economic incentives to take any N₂O abatement measures because this entails capital and operating costs but no financial benefits. Therefore, the CDM project activity is considered additional. No investment analysis is required for the proposed CDM project activity.

Barrier analysis

The additionality of the project has been demonstrated according to the applied methodology, therefore a barrier analysis is not necessary.

Common practice analysis

The additionality of the project has been demonstrated according to the applied methodology, therefore a common practice analysis is not necessary.

Summary

The validation team was able to verify that CDM has been introduced and considered prior to the starting date of the project activity. The additionality of the project has been demonstrated according to the applied methodology.

In conclusion, without the CERs, the project will not be implemented.

5.2.6 Monitoring Methodology

The monitoring plan of the proposed CDM project activity is in compliance with the applied monitoring methodology ACM0019 "N₂O abatement from nitric acid production", Version 01.0.0.

It has been assessed that the project has correctly applied the methodology requirements. Section B.7.1 of the PDD contains further information of the monitoring plan (e.g. tables measurement equipment, procedures, etc.).

The following data are determined ex-ante:

The following data and parameters as described in Section B.6.2 of the PDD were available during the validation as ex-ante:

1. Default N₂O baseline emissions factor in the calendar year y of the monitoring period n ;
2. Global warming potential of the nitrous oxide for this commitment period;
3. R_u , Universal ideal gases constant;
4. MM_i Molecular mass of greenhouse gas i ;
5. P_n Total pressure at normal conditions;
6. T_n Temperature at normal conditions;
7. $T_{open,n}$ Fraction of time in monitoring period n during which the by-pass valve on the line feeding the tertiary N₂O abatement facility was open to vent the gas directly to the atmosphere.

The validation team has reviewed these data and parameters and they are consistent with the methodology and documents provided are deemed appropriate and conservative.

Parameters monitored ex-post

The baseline and project emission parameters that are monitored ex-post are described in details in Section B.7.1 of the PDD and as follows:

1. $tHNO_3$: Nitric acid produced in the monitoring period
2. $F_{N_2O, tailgas,h}$: Mass flow of N₂O in the gaseous stream of the tail gas
3. h_n : Number of hours that the plant was in operation
4. $T_{open,n}$: Fraction of time in monitoring period n during which the by-pass valve on the line feeding the tertiary N₂O abatement facility was open to vent the gas directly to the atmosphere
5. $PE_{FF,n}$ (corresponding to $PE_{CO_2,tertiary,n}$): Project emissions related to fossil fuel input to the destruction facility and/or re-heater in monitoring
6. $FC_{i,j,y}$: Quantity of fuel type i combusted in process j during the year
7. $V_{t,wb}$: Volumetric flow of the gaseous stream in time interval t on a wet basis
8. $v_{i,t,db}$: Volumetric fraction of greenhouse gas i in a time interval t on a dry basis
9. T_t : Temperature in the gaseous stream in time interval
10. P_t : Pressure of the gaseous stream in time interval
11. ER_n : Emission reductions in monitoring period
12. $w_{C,i,y}$: Weighted average mass fraction of carbon in fuel type

The GHG indicators, parameters, monitoring methods, frequency of measurement and measuring instrument & equipments are deemed acceptable.

Where applicable, the parameters and assumptions are sourced according to the respective 2006 IPCC default values.^{/IPCC2006/}

The monitoring of emission reductions generated by the project activity will be carried out systematically according to the monitoring plan. All relevant parameters will be monitored as required by the methodology throughout the implementation of the project activity.

It has been assessed that all parameters required by the methodology have been included in the PDD Section B.7.1.

All monitoring data will be electronically archived for a period of 2 years after the crediting period.

5.2.7 Monitoring Plan

The validation team applied a two-step process in assessing the compliance with the requirements of monitoring plan as follows:

- a) Compliance of the monitoring plan with the approved methodology:
 - (i) Identified the list of parameters required by the selected approved methodology by means of document review;
 - (ii) Confirm that the monitoring plan contains all the necessary parameters. The parameters and the means of monitoring are described in the plan and they comply with the requirements of the applied methodology ACM0019 and the relevant tools.
- b) Implementation of the plan:
 - (i) The monitoring provisions described in the monitoring plan are feasible within the project design;
 - (ii) The means of implementation of the monitoring plan, including the data management, quality assurance and quality control procedures will be developed when the project is in operation to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex-post and are verifiable.

The assessment conducted by the validation team is by means of review of the PDD section B.7, interviews with relevant personnel, review of project plan and inspections of the proposed CDM project activity program and schedule.

5.2.8 Project Management Planning

The validation team assessed the proposed management system and quality assurance of the proposed project activity.

The operational and management structure of the project operator will be implemented when the project begins operation to monitor the emission reductions as described in the monitoring plan of section B.7.2 and Annex 4 of the PDD. A formal set of monitoring and verification procedures will be established including the

control system and steps required for the monitoring system features. It indicates the responsibilities and institutional arrangements for data collection and archiving.

A management and operational system will be implemented to cover the operations, management of the monitoring and record keeping such as:

1. Establishing and maintaining the appropriate monitoring system for consumption of gas and electricity generated by the proposed project.
2. QA/QC procedures for monitoring of Project Activity measurements;
3. Assigning monitoring responsibilities to personnel;

All measurements will use calibrated measurement equipments that will be maintained and checked regularly for proper functioning.

Hence, all necessary indicators of importance for controlling and reporting the projects performance have been incorporated in the monitoring plan

5.2.9 Crediting Period

The project activity applies a fixed 10-year crediting period as according to Section C.2.1.1 of the PDD.

The starting date of the crediting period of the proposed CDM project is defined as 2011-12-01 or the date of registration, whichever is later. This is assessed as appropriate.

5.2.10 Environmental Impacts

According to the host country legislation, Environmental Protection Act, 1997, an environment impact assessment is required for the fertiliser complex where the nitric acid plant is located.

An EIA was conducted and in compliance with the environmental regulations: National Environmental Policy in 2005 for Environmental Impact Assessment in Pakistan – overview, implementation and effectiveness.

The Environmental Approval for construction of the Fertiliser Complex was issued by the Environmental Protection Agency of Punjab on 2007-05-26.

The Environmental Approval for operation of the complex was issued by the Environmental Protection Agency of Punjab on 2010-08-18.

There are no major environmental impacts caused by the project. The project owner has to submit an annual report on the monitoring of air, water and pollution during the project operations.

There are no transboundary issues for this project. The project is located in the state of Punjab, Pakistan and not at location bordering with India or China or any other countries.. This was confirmed during the on-site visit.

5.2.11 Comments by Local Stakeholders

A local stakeholders' consultation was conducted on 2011-07-18 to invite comments on the proposed CDM project activity by public announcement prior to the publication of the PDD on the UNFCCC website.

The stakeholder consultation was held at the project activity site office located at Fatima Fertilizer Company Limited site and was conducted by the representatives from Fatima Fertilizer Company Limited. The consultation was held to inform the community and local authority representatives on the implementation of N₂O abatement project as a CDM project corresponding to Kyoto Protocol.

A brief description of the comments made by the local stakeholders that have been invited was compiled and presented in the section E.2 of PDD.

The validation team confirmed by means of document review::

- a) Comments by local stakeholders are considered reasonably relevant for the proposed CDM project activity. There are no residents that can be directly influenced by the proposed project;
- b) The summary of the comments received as provided in section E.2 of the PDD is considered comprehensive;
- c) There are no major negative comments or opinions received during the stakeholders' consultation.

In conclusion, the local stakeholder consultation has been conducted in a transparent and appropriate manner.

6 VALIDATION OPINION

N.serve Environmental Services GmbH has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the project: **“Fatima N₂O Abatement Project”** with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board

In the course of the validation 14 Corrective Action Requests (CARs), 3 Clarification Requests (CLs) were raised and closed out. 1 Forward Action Request (FAR) was raised that will be checked by verifying DOE during the 1st verification.

The review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria Pakistan and all relevant UNFCCC requirements for CDM. Project activity approvals have been obtained from DNA of Pakistan vide the Letter of Approval (HCA) dated 2011-10-07 and from DNA of UK dated 2011-11-16.
- The project additionality is sufficiently justified in the PDD.
- The monitoring plan is transparent and adequate.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 4,581,135 tCO₂e are most likely to be achieved within the 10 years crediting period.

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

Kuala Lumpur, 2012-03-29



Cheong, Chun Yuen (Robert)
TÜV NORD JI/CDM CP
Validation Team Leader

Essen, 2012-03-29



Schubert, Jochen
TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
Licence and Approvals	
/A1/	Company Certificate of Incorporation dated 2003-12-24
/A2/	<ol style="list-style-type: none"> 1. Environmental Approval Construction issued by Environment Protection Department dated 2007-05-26 2. Environmental Approval Operation Phase issued by Environment Protection Department dated 2010-08-18 3. EIA Submission by Fatima dated 2006-11-27
/A3/	Plant Design Capacity from Uhde GmbH undated
CDM Consideration	
/B1/	N ₂ O Abatement Unit Contract with Uhde GmbH dated 2007-10-26
/B2/	Board of Directors Resolution dated 2007-08-22
/B3/	Host country approval dated 2011-10-07
/B4/	<ol style="list-style-type: none"> 1. Emails communication with various parties and dates on history of the project development 2. Chronicle events spreadsheet
/B5/	MP revision submission and MP respond history <ol style="list-style-type: none"> 1. AM-REV 0090 submission date 2008-05-06. MP Respond dated 2007-06-27 2. AM-REV -0115 submission date 2008-09-19. MP respond dated 2009-05-08 3. AM-REV-0158 submission dated 2009-07-28. MP respond dated 2009-09-18
/B6/	Draft Fatima CDM Agreement with Mitsubishi dated 2007-12-06
/B7/	Proposal from CARBON CDM Service Agreement dated 2007-03-28
/B8/	Appeal letter to EB dated 2010-11-16
/B9/	Annex I Letter of Approvals dated 2011-11-16

Reference	Document
/B10/	MoC dated 2011-06-24
Technical Specifications	
/C1/	<ol style="list-style-type: none"> 1. Uhde NA plant design capacity 2. Uhde Process Flow Diagram 1 Rev 01 3. Uhde Process Flow Diagram 2 Rev 01 4. Uhde Process Flow Diagram # 3 (Steam & Condensate) 5. Uhde Process Flow Diagram # 4 (Cooling Water)
/C2/	EnviNOx CDM plant design
/C3/	EnviNOx equipment list
/C4/	<ol style="list-style-type: none"> 1. Emerson Gas Analyzer system 2. Ammonia Evaporator Specification 3. EnviNOx reactor vessel data 4. EnviNOx reactor data 5. NH₃, Methane, Tail Gas mixer specifications
/C5/	<ol style="list-style-type: none"> 1. EnviNox technical document 2. Uhde Process Flow Diagram
Project Operation	
/E2/	Project activity Electricity Consumption from Uhde GmbH
/E3/	Operation Parameters dated 2011-08-20
ER calculations	
/F1/	Heating values of natural gas from Mari Gas Company dated 2011-08-16
/F2/	Natural gas composition from the supplier
/F5/	Production data dated 2011-08-20
/F6/	ER Calculations
Stakeholders Consultation	
/G1/	Stakeholders Consultation Program dated 2011-07-18 Stakeholders consultation attendance dated 2011-07-18
/G2/	Newspaper public notice dated 2011-07-10

Reference	Document
	Newspaper report on stakeholders consultation dated 2011-08-23 to 2011-08-25 Public Notice for stakeholders consultation English undated Public notice for stakeholders consultation Pakistani undated
/G3/	Stakeholders consultation Q & A
/PDD/	<ol style="list-style-type: none"> 1. PDD of the project "Fatima N₂O Abatement Project" Version 01, dated 2011-07-28 2. PDD of the project "Fatima N₂O Abatement Project" Version 02, dated 2011-10-28 3. PDD of the project "Fatima N₂O Abatement Project" Version 02.1, dated 2012-01-20 4. PDD of project activity "Fatima N₂O Abatement Project" Version 02.2 dated 2012-03-13
Footnote and Others	
/X1/	National Environment Quality Standard
/X2/	Best Available Technique Production of Nitric Acid

Table 7-2: Background investigation and assessment documents

Reference	Document
/ACM19/	ACM0019: N ₂ O abatement from nitric acid production version 01.0.0
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/EN/	EN14181 (2004) "Stationary source emissions - Quality assurance of automated measuring systems"
/GCP/	Guidelines for completing CDM-PDD and CDM-NM
/GPC	Guidelines for the demonstration and assessment of prior consideration of CDM EB 62 Annex 13.
/GCDM/	Glossary of CDM Terms version 5
/IPCC/	<ul style="list-style-type: none"> • IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000 • Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual

Reference	Document
/PDD-T/	Project Design Document Form (CDM PDD) – Version 03
/KP/	Kyoto Protocol (1997)
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
/TFFC/	Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion
/TMF/	Tool to determine the mass flow of a greenhouse gas in a gaseous stream
/NC/	Validation contract between N.serve Environmental Services GmbH and TÜV NORD CERT GmbH dated 2011-07-17
/VVM/	Validation and Verification Manual (Version 01.2, Annex 1, EB 55)
Research Documents	
/EIA/	Pakistan EIA Guidelines An overview dated 2006-06-12 National Environmental Policy 2005 EIA in Pakistan - Overview implementation and effectiveness June 2006

Table 7-3: Websites used

Reference	Link	Organisation
/cd4cdm/	www.cd4cdm.org	UNEP Riso Centre
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Arif-Ur-Rehman	Fatima Fertilizer Company Limited / Director Operations
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Syed Hussain Iman Bukhari	Fatima Fertilizer Company Limited / Sr. Operation Manager
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Mahmood Ali	Fatima Fertilizer Company Limited / Unit Manager, Nitric Acid
	V	<input checked="" type="checkbox"/> Mr.	Muhammad Nabeel Shakir	Fatima Fertilizer Company Limited /



Reference	Mol ¹		Name	Organisation / Function
		<input type="checkbox"/> Ms		Engineer, Process Technical Services
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Shahzad Mehdi	Fatima Fertilizer Company Limited / Sr. Process Engineer
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Ali Qureshi	Fatima Fertilizer Company Limited / Safety Engineer
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Nadeem Shah	Fatima Fertilizer Company Limited / E-II Engineer
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	M. Farooq	Fatima Fertilizer Company Limited / E-III Engineer
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Nadeem Iqbal	Fatima Fertilizer Company Limited / DCS Operator
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Gulam Murlazu	Fatima Fertilizer Company Limited / DCS Operator
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Mohammed Nasir	Fatima Fertilizer Company Limited / Laboratory
/IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Martin Stilkenbaeumer	N.serve Environmental Services GmbH / Project Manager
	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Wolfgang Bruckner	N.serve environmental Services GmbH / Project Manager
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Javed E. Mir	Engineering Industrial Supplies /

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Validation Protocol
- A2:** Assessment of Baseline Identification
- A3:** Assessment of Financial Parameters
- A4:** Assessment of Barrier analysis
- A5:** Outcome of the GSCP
- A6:** Appointment certificates of the team members

ANNEX 1: VALIDATION PROTOCOL

Table A-1: Requirements Checklist

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
A. General Description of Project Activity				
A.1. Approval <i>The written approval of the parties involved is a mandatory requirement</i>				
<p>A.1.1. Has the project provided written approvals of all parties involved? (EB 55 Annex 1, § 44) <i>Indicate whether a letter of approval has been received, with a clear reference to the supporting documentation.</i> <i>Indicate whether this letter was provided to the DOE by the project participants or directly by the DNA</i></p>	<p><i>Description:</i></p> <p>Section A.3 of the PDD states the host party is Pakistan and the annex I party is UK</p> <p>The host country approval was issued by the National Energy Conservation Center (ENERCON), DNA for Pakistan dated 2011-08-23.</p> <p>The project title stated in the host country approval is same as in section A.1 of PDD.</p> <p><i>Justification of evidences:</i></p> <p>The host country approval was submitted to the validation team during the on-site visit.</p> <p>However, Annex 1 party approval has not been submitted</p>	<p>/PDD/ /B3/</p>	CAR.A1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<p><i>Conclusion:</i></p> <p>Host country approval had been submitted by the project owner.</p> <p>CAR.A1: The Annex I LoA and MoC have not been submitted.</p>			
<p>A.1.2. Are the approvals issued from organisations listed as DNAs on the UNFCCC CDM website?</p> <p>(EB 55 Annex 1, §§ 44, 47, 48, 49 (b), 49 (c), 53)</p> <p><i>Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.</i></p>	<p><i>Description:</i></p> <p>The host country approval was issued by the National Energy Conservation Center (ENERCON), DNA for Pakistan is same as the listed DNA on the UNFCCC CDM website.</p> <p>Annex 1 approval has not been submitted.</p> <p><i>Justification of evidences:</i></p> <p>The validation team had cross-checked with UNFCCC website to confirm the name of the host country DNA.</p> <p><i>Conclusion:</i></p> <p>The Annex I party approval will be assessed when submitted</p> <p>Refer to CAR.A1 above.</p>	<p>/PDD/ /B3/ /unfccc/</p>	CAR.A1	OK
<p>A.1.3. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol?</p> <p>(EB 55 Annex 1, § 45(a))</p>	<p><i>Description:</i></p> <p>The host country approval confirmed the host country Pakistan ratified the Kyoto Protocol on 2005-01-11.</p> <p>Annex I party approval has not been received.</p> <p><i>Justification of evidences:</i></p> <p>Review of the host country approval to confirm it is a party to the Kyoto Protocol.</p>	<p>/PDD/ /B3/ /unfccc/</p>	CAR.A1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<p><i>Conclusion:</i> The Annex I party approval will be assessed when submitted.</p> <p>Refer to CAR.A1 above.</p>			
<p>A.1.4. Do the written approvals confirm that the participation is voluntary? (EB 55 Annex 1, § 45(b))</p>	<p><i>Description:</i></p> <p>The host country approval confirms voluntary participation to the CDM project.</p> <p>Annex I party approval has not been received. .</p> <p><i>Justification of evidences:</i></p> <p>By means of document review of the host country approval.</p> <p><i>Conclusion:</i></p> <p>The Annex I party approval will be assessed when submitted.</p> <p>Refer to CAR.A1 above.</p>	<p>/PDD/ /B3/</p>	<p>CAR.A1</p>	<p>OK</p>
<p>A.1.5. Does the written approval from the host country confirm7 that the project contributes to the sustainable development in the country? (EB 55 Annex 1, § 45(c))</p>	<p><i>Description:</i></p> <p>The host country approval confirms the project will contribute to sustainability development.</p> <p>Annex I party approval has not been received.</p> <p><i>Justification of evidences:</i></p> <p>By means of document review of the host country approval.</p> <p><i>Conclusion:</i></p> <p>The Annex I party approval will be assessed when submitted Refer to CAR.A1 above.</p>	<p>/PDD/ /B3/</p>	<p>CAR.A1</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
A.1.6. Do the written approvals refer to the precise project title in the PDD submitted for registration or an additional specification of the project activity, e.g. PDD version number? (EB 55 Annex 1, §§ 45(d), 50)	<p><i>Description:</i></p> <p>The project title stated in the host country approval refers to the project title in the webhosted PDD and PDD submit for registration. The approval did not mention any specification of the project activity such as PDD version number.</p> <p>Annex I party approval has not been received.</p> <p><i>Justification of evidences:</i></p> <p>By means of reviewing the host country approval.</p> <p><i>Conclusion:</i></p> <p>The Annex I party approval will be assessed when submitted Refer to CAR.A1 above.</p>	/PDD/ /B3/	CAR.A1	OK
A.1.7. Are the written approvals unconditional with regard to A.1.3 to A.1.6? (EB 55 Annex 1, § 46)	<p><i>Description:</i></p> <p>The host country approval is unconditional with regards to A.1.3 to A.1.6.</p> <p>Annex I party approval has not been received.</p> <p><i>Justification of evidences:</i></p> <p>By means of reviewing the host country approval.</p> <p><i>Conclusion:</i></p> <p>The Annex I party approval will be assessed when submitted Refer to CAR.A1 above.</p>	/PDD/ /B3/	CAR.A1	OK
A.1.8. Is the information regarding the project participants listed in section A3 and in Annex 1	<p><i>Description:</i></p>	/PDD/	CAR.A1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
of the PDD internally consistent to each other? (EB 55 Annex 1, § 51)	<p>The project participants listed in section A.3 and Annex 1 of PDD are consistent to each other.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the PDD respective sections and interviewed the project participant during on-site visit on 2011-08-26 to 2011-08-28.</p> <p>The MoC has not been submitted for confirmation of the project participants.</p> <p><i>Conclusion:</i></p> <p>The Annex I party approval will be assessed when submitted.</p> <p>Refer to CAR.A1 above.</p>			
<p>A.1.9. Are all project participants listed in the PDD approved at least by one Party involved?</p> <p>(EB 55 Annex 1, § 51)</p> <p><i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol.</i></p> <p><i>Describe the means of validation employed to draw this conclusion.</i></p>	<p><i>Description:</i></p> <p>The project participants listed in the PDD and host country approval are Fatima Fertilizer Company Limited and N.serve Environmental Services GmbH.</p> <p>Annex I party approvals has not been received.</p> <p><i>Justification of evidences:</i></p> <p>By means of document review of HCA and PDD.</p> <p><i>Conclusion:</i> The Annex I party approval will be assessed when submitted.</p> <p>Refer to CAR.A1 above.</p>	/PDD/	CAR.A1	OK
A.1.10. Are any other project participants approved but	<i>Description:</i>	/PDD/	CAR.A1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
not listed in the PDD? (EB 55 Annex 1, § 52)	There are no other project participants approved by the host country besides the entities listed in Section A.3 and Annex I of the PDD. Annex I party approval has not been received. <i>Justification of evidences:</i> By means of document review of the HCA and PDD. <i>Conclusion:</i> The Annex I party approval will be assessed when submitted. Refer to CAR.A1 above.	/B3/		
A.1.11.Does the DoE have a direct contractual relationship with the PP? (EB 55 Annex 1, § 51; EB 50 Annex 48, §§ 7–9) <i>Check whether the PPs listed in the published PDD are still listed in the PDD going to be submitted to request for registration.</i>	<i>Description:</i> The DOE has a contractual relationship with one of the project participants. The project participant is N.serve Environmental Services GmbH. <i>Justification of evidences:</i> The validation team has checked the contract agreement with TÜV NORD Cert GmbH and N.serve Environmental Services GmbH. <i>Conclusion:</i> No further issues have been found on this matter.	/PDD/ /VC/	OK	OK
A.2. Contribution to Sustainable Development <i>The project's contribution to sustainable development is assessed.</i>				
A.2.1. Has the host country confirmed that the project assists it in achieving sustainable	<i>Description:</i> The host country approval confirmed the project assists in	/PDD/ /B3/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>development?</p> <p>(EB 55 Annex 1, §§ 125–127)</p> <p><i>Contains a statement confirming whether the letter of approval by the DNA of the host party confirmed the contribution of the project to the sustainable development of the Host Party.</i></p>	<p>achieving sustainable development.</p> <p><i>Justification of evidences:</i></p> <p>By means of document review of the HCA.</p> <p><i>Conclusion:</i></p> <p>The project will contribute to sustainable development in the host country.</p>			
<p>A.2.2. Will the project create other environmental or social benefits than GHG emission reductions?</p> <p>(EB 55 Annex 1, §§ 125–127)</p> <p><i>Describe the other positive aspects not related to GHG emission reduction on the environment.</i></p>	<p><i>Description:</i> Besides the GHG emission reductions, the project will contribute to following:</p> <ul style="list-style-type: none"> • Reduction of air pollution by abatement of the emission of N₂O to the atmosphere; • Reduction of the adverse health impacts from air pollution; • Reduction of the emissions of greenhouse gases to combat global climate change; and • Promotion of local skills in monitoring of GHG emissions. <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the PDD and interview the project owner during the onsite visit.</p> <p><i>Conclusion:</i></p> <p>The project will bring social and economic benefits to the people around the project location with better air quality and reduce N₂O emissions.</p>	<p>/PDD/ /onsite/</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
A.3. PDD editorial aspects <i>The PDD used as a basis for validation shall be prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website.</i>				
A.3.1. Has the latest version of the PDD form been applied? (EB 55 Annex 1, § 55)	<p><i>Description:</i></p> <p>The CDM-PDD applied is version 03.0 dated 2006-07-28 approved at EB 25 meeting (annex 15) on 2006-07-19 to 2006-07-27. It is the latest version of CDM-PDD published by UNFCCC on its official website.</p> <p><i>Justification of evidences:</i></p> <p>http://cdm.unfccc.int/Reference/PDDs_Forms/PDDs/index.html</p> <p><i>Conclusion:</i></p> <p>The PDD template applied is consistent with the published template at UNFCCC website</p> <p>CAR.A2: PDD Version 01, Section A.4.1.4: The geographical coordinate's representation is incorrect.</p> <p>CAR.A3: PDD Version 01:</p> <ol style="list-style-type: none"> 1. There are several clerical error need to be corrected 2. The several dates format are not in accordance to the PDD guidelines 3. Section B.8 did not include details of the entities, persons 	/PDD/ /unfccc/	CAR.A2 CAR.A3	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	and no confirmation whether they are project participants..			
A.3.2. Has the PDD been duly filled in accordance with the latest guidance(s)? (EB 55 Annex 1, §§ 56–57)	<p><i>Description:</i></p> <p>The PDD has in general been filled in accordance with the latest PDD guidelines applied version 07 with effective date 2008-08-02 on EB Meeting 41 (Annex 12) 2008-07-30 to 2008-08-02.</p> <p><i>Justification of evidences:</i></p> <p>http://cdm.unfccc.int/Reference/Guidclarif/pdd/PDD_guid04_v07.pdf</p> <p><i>Conclusion:</i></p> <p>Refer to CAR.A3 (2)</p>	/PDD/ /PDDT/	CAR.A4	OK
<p>A.4. Technology to be employed</p> <p><i>Validation of project technology focuses on the project engineering, choice of technology and competence/maintenance needs. The DOE should ensure that environmentally safe and sound technology and know-how is used.</i></p>				
A.4.1. Does the PDD contain a clear, accurate and complete project description? (EB 55 Annex 1, §§ 58–59) <i>The PDD shall contain a clear description of the project activity which provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation.</i>	<p><i>Description:</i> Section A.2 and A.4.3 of PDD describe the project activity..</p> <p>This project is a Tertiary N₂O abatement at a nitric acid plant</p> <p><i>Justification of evidences:</i></p> <p>By means of document review and on-site assessment, the following documents were reviewed and the project owner was interviewed.</p>	/PDD/ /C1/ /C2/ /C3/ /C4/ /C5/	CAR.A4	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p><i>Pl. consider esp. chapters A.2, A.4.2 and A.4.3 (in case of LSC PDD) for assessment.</i></p> <p><i>Describe the process undertaken to validate the accuracy and completeness of the project description.</i></p> <p><i>Contain the DOE's opinion on the accuracy and completeness of the project description.</i></p>	<ul style="list-style-type: none"> PDD Location of nitric acid plant and coordinates. Proposed Technology employed Proposed equipment technical data and specifications. <p><i>Conclusion:</i></p> <p>The following findings were found:</p> <p>CAR.A4: PDD Version 01 Section A.4.3: The technology applied in the project activity was not described clearly.</p>			
<p>A.4.2. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the project will be implemented acc to the project description?</p>	<p><i>Description:</i></p> <p>The project is a new installation that will be implemented according to the project description in the PDD.</p> <p><i>Justification of evidences:</i></p> <p>During the on-site visit on 2011-08-26 to 2011-08-28, installation had not started.</p> <p>The validation team has interviewed the project technical personnel, review of the technical description and equipment to confirm on the design and implementation of the project.</p> <p><i>Conclusion:</i></p> <p>It can be confirmed that the project will be implemented as described in the PDD.</p>	<p>/PDD/ /ACM19/ /onsite/ /C1/ /C2/ /C3/ /C4/ /C5/</p>	OK	OK
<p>A.4.3. In case the project involves alteration of the existing installation or process, is a clear</p>	<p><i>Description:</i></p> <p>The N₂O abatement equipment stated in the PDD is new</p>	<p>/PDD/ /C1/</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>description available regarding the differences between the project and the pre-project situation?</p> <p>(EB 55 Annex 1, §§ 63–64) <i>Describe the steps taken to validate this issue.</i></p>	<p>installation and does not involve alteration of any existing installation, which has been confirmed during on-site visit by the validation team.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the relevant technical documentation and monitoring equipment for the monitoring of the N₂O abatement. The project owner and project consultant were interviewed during the onsite visit.</p> <p><i>Conclusion:</i></p> <p>It can be confirmed the project activity is a new N₂O abatement activity.</p>	<p>/C2/ /C3/ /C4/ /C5/ /onsite</p>		
<p>A.4.4. Does the project design engineering reflect current good practices?</p> <p><i>Consider the equipment specifications, literature (e.g. EU BREF papers) and professional experiences. Describe the process undertaken to assess the engineering.</i></p>	<p><i>Description:</i></p> <p>The project design engineering reflects good practices that are not available in the host country.</p> <p>The proposed technology and equipment were imported from Germany.</p> <p><i>Justification of evidences:</i></p> <p>During the on-site visit, the validation team has reviewed the technical and equipment specifications as stated in the feasibility studies. The project owners and technical personnel were interviewed on the supplies of the technology and equipment was imported from Germany.</p> <p><i>Conclusion:</i></p> <p>The project engineering and design reflects good practices in N₂O abatement.</p>	<p>/PDD/ /C1/ /C2/ /C3/ /C4/ /C5/ /onsite</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>A.4.5. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?</p> <p><i>Describe the process undertaken to assess the state of the art technology.</i></p>	<p><i>Description:</i></p> <p>This project applies state of the art N₂O abatement equipment which is not available in the host country. The equipment selected for the project activity is suitable for the proposed abatement design and is acceptable to the host country.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has checked the technical data by reviewing the technical information and reports for the type of equipment that will be installed.</p> <p><i>Conclusion:</i></p> <p>The technology and equipment applied is suitable for N₂O abatement.</p>	<p>/PDD/ /C1/ /C2/ /C3/ /C4/ /C5/ /onsite</p>	<p>OK</p>	<p>OK</p>
<p>A.4.6. Does the project make provisions for meeting training and maintenance needs?</p> <p><i>Describe the process undertaken to assess the maintenance and training needs.</i></p>	<p><i>Description:</i></p> <p>The project owner will provide necessary operation and monitoring training to the employees.</p> <p><i>Justification of evidences:</i></p> <p>The provisions of training have been stated in section B.7.2 of the PDD.</p> <p>Only those who are qualified employee will be designated to operate and monitor the abatement system.</p> <p><i>Conclusion:</i></p> <p>By means of onsite interview and review of documents, proper training will be provided by the equipment and monitoring suppliers/.</p>	<p>/PDD/ /C1/ /C2/ /C3/ /C4/ /C5/ /onsite</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
A.5. Small scale project activity <i>It is assessed whether the project qualifies as small-scale CDM project activity</i>				
A.5.1. Does the project qualify as a small scale CDM project activity as defined in decision 4 / CMP.1 annex II? (EB 55 Annex 1, §§ 135–136 (a))	<p><i>Description:</i> The project activity is a large scale, therefore no assessment is required.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	/ACM19/	OK	OK
A.5.2. Does the project apply one of the approved small scale categories and any methodology and tool referred therein? (EB 55 Annex 1, § 136 (b)) <i>Check, if applicable the expiry dates of the applied methodology. Further, take into consideration the general guidance to the methodologies¹, which provide guidance on equipment capacity, equipment performance, sampling and other monitoring related issues.</i>	<p><i>Description:</i> The project activity is a large scale, therefore no assessment is required.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	/ACM19/	OK	OK
A.5.3. Is the small scale project activity not a debundled component of a larger project activity?	<p><i>Description:</i> The project activity is a large scale therefore no assessment is</p>	/ACM19/	OK	OK

¹ <http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 55 Annex 1, § 136 (c)) <i>Describe the steps taken to validate this issue. PI refer to the Compendium of guidance on debundling (EB 36, Annex 27 54, Annex 13).</i>	required. <i>Justification of evidences:</i> <i>Conclusion:</i>			
A.5.4. Is an assessment of the environmental impacts of the proposed SSC CDM project activity required by the host Party? (EB 55 Annex 1, § 136 (d))	<i>Description:</i> The project activity is a large scale, therefore no assessment is required. <i>Justification of evidences:</i> <i>Conclusion:</i>	/ACM19/	OK	OK
B. Project Baseline, Additionality and Monitoring Plan				
B.1. Application of the Methodology				
B.1.1. Does the project apply an approved and applicable CDM methodology and a valid version thereof? (EB 55 Annex 1, § 65) <i>Describe the steps taken to validate this issue.</i>	<i>Description:</i> The project activity applies the approved large scale methodology ACM0019, “N ₂ O abatement from nitric acid production” Version 01.0.0, Scope 5 approved at EB 61 meeting. At the time of publishing the PDD for global stakeholder consultation from 2011-07-30 to 2011-08-28, the version of the applied methodology is valid and applicable.	/PDD/ /ACM19/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<p><i>Justification of evidences:</i></p> <p>To ensure that the applied methodology is approved by the EB, the PPs has chosen the available latest version, the methodologies section of UNFCCC CDM website at the time of PDD submitted for publishing</p> <p>(http://cdm.unfccc.int/methodologies/DB/LL9ZXJ30XFUU757WE6M3ZX0AS9NQEAE)</p> <p>The applicability of the project was assessed, the PDD was reviewed and the applicability determination of the PDD was counterchecked against the criteria given in the applicability section of the methodology.</p> <p>The information in the PDD was further reviewed during on-site visit to confirm the PDD information is valid and reflects the reality of the proposed project activity.</p> <p><i>Conclusion:</i></p> <p>The project meets the applicability criteria of the methodology.</p>			
<p>B.1.2. Is the applied CDM methodology identical with the version available on the UNFCCC website?</p> <p>(EB 55 Annex 1, §§ 65, 70)</p> <p><i>Describe the steps taken to validate this issue.</i></p>	<p><i>Description:</i></p> <p>The methodology applied is identical with the version available on UNFCCC website.</p> <p><i>Justification of evidences:</i></p> <p>This has been reviewed during validation and by visiting the UNFCCC website</p> <p>(http://cdm.unfccc.int/methodologies/DB/LL9ZXJ30XFUU757WE6M3ZX0AS9NQEAE)</p>	<p>/PDD/ /unfccc</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<p><i>Conclusion:</i></p> <p>The methodology stated in PDD is identical to the version available in UNFCCC web site.</p>			
<p>B.1.3. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled?</p> <p>(EB 55 Annex 1, §§ 66(a)–(b), 68, 71, 76)</p> <p><i>Describe for <u>each</u> applicability criterion listed in the selected approved methodology the steps taken to assess the information contained in the PDD.</i></p>	<p><i>Description:</i></p> <p>The methodology ACM0019 applicability criteria and justification of the project are summarized as follows:</p> <ol style="list-style-type: none"> 1. In the case that the nitric acid plant started commercial operation before the implementation of the CDM project activity, the project participants shall demonstrate that there was no secondary or tertiary abatement technology installed in the respective nitric acid plant; 2. Continuous real-time measurements of the N₂O concentration and the total gas volume flow can be carried out in the tail gas stream after the abatement of N₂O emissions throughout the crediting period of the project activity; 3. No law or regulation which mandates the complete or partial destruction of N₂O from nitric acid plants exists in the host country where the CDM project activity is implemented.. <p><i>Justification of evidences:</i></p> <p>Review of methodology, PDD and relevant host country environmental protection requirements.</p> <p><i>Conclusion:</i></p> <p>By means of document review, the project activity meets the</p>	<p>/PDD/ /ACM19/ /X1/</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	applicability of the methodology..			
<p>B.1.4. In case one or more applicability criteria have not been met, has the validation team requested clarification to, revision of or deviation from the methodology in accordance with the latest guidelines?</p> <p>(EB 55 Annex 1, §§ 72–75)</p>	<p><i>Description:</i></p> <p>The project meets the methodology applicability</p> <p><i>Justification: of evidences:</i></p> <p>Review of PDD with methodology</p> <p><i>Conclusion:</i></p> <p>No request for clarification or revision required.</p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.1.5. Is the project in accordance with every other stipulation or requirement mentioned in all sections of the methodology and in guidances for approved methodologies provided by the CDM EB?</p> <p>(EB 55 Annex 1, § 69, 71)</p> <p><i>Describe the steps taken to check whether the proposed project activity meets all the other possible stipulations and /or limitations mentioned in all sections of the approved methodology selected.</i></p>	<p><i>Description:</i></p> <p>The project is in accordance to every other stipulation or requirement mentioned in all sections of the applied methodology.</p> <p><i>Justification of evidences:</i></p> <p>No deviation has been found in the PDD.</p> <p><i>Conclusion:</i></p> <p>The project activity meets the applicability of the methodology.</p>	<p>/PDD/ /ACM19/</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.2. Project Boundaries <i>Project Boundaries are the limits and borders defining the GHG emission reduction project</i>				
<p>B.2.1. Are the project's spatial boundaries (geographical) clearly defined?</p> <p>(EB 55 Annex 1, §§ 67(a), 78–80)</p> <p><i>Provide information on how the validation of the geographical boundary has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i></p>	<p><i>Description:</i></p> <p>The project spatial boundaries as stated in PDD section B.3 is the nitric acid plant where the N₂O abatement system will be installed.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the plant layout and design drawing during the on-site visit to check on the project location.</p> <p><i>Conclusion:</i></p> <p>The project spatial boundaries have been defined but the following finding has been observed:</p> <p>CAR.B1: PDD Version 01, Section B.3: The definition of the project boundary is not in accordance with the methodology.</p>	<p>/PDD/ /ACM19/</p>	<p>CAR.B1</p>	<p>OK</p>
<p>B.2.2. Are all sources and GHGs included in the project boundary as required in the applied methodology?</p> <p>(EB 55 Annex 1, §§ 67(a), 78–80)</p> <p><i>Provide information on how the validation of the GHGs and sources has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i></p>	<p><i>Description:</i></p> <p>A table need to be included in section B.3 of the PDD to demonstrate the sources and GHGs in the project boundary.</p> <p><i>Justification of evidences:</i></p> <p>This was validated by reviewing the PDD, methodology and documents provided during the on-site visit.</p> <p><i>Conclusion:</i></p> <p>By means of document review and onsite visit, the GHGs are in</p>	<p>/PDD/ /ACM19/ /onsite/</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	accordance to the methodology			
<p>B.2.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified?</p> <p>(EB 55 Annex 1, §§ 67(a), 78–80)</p> <p><i>Confirm if the justification provided by the PPs is reasonable, based on assessment of supporting documented evidence provided by the PPs or by onsite observations.</i></p>	<p><i>Description:</i></p> <p>There is a requirement of the methodology that requires inclusion of the sources and gases of the project boundary in the PDD.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the PDD, project activity baseline and boundary that the sources and GHGs that will occur.</p> <p><i>Conclusion:</i></p> <p>By means of document review, there are no choices in the methodology.</p>	<p>/PDD/ /ACM19/ /onsite</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.3. Baseline Identification <i>The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.</i>				
B.3.1. What possible baseline scenarios have been considered? (EB 55 Annex 1, §§ 67(b), 83) <i>Fill in all alternatives in table A-2.</i>	<i>Description:</i> The project activity baseline is the N ₂ O is emitted to the atmosphere with no N ₂ O abatement measure being implemented. <i>Justification of evidences:</i> The validation team has reviewed the relevant documents during on-site visit to confirm the baseline. <i>Conclusion:</i> CAR.B2: PDD Version 01 Section B.4: The baseline scenario of the project activity was not described according to the methodology	/PDD/ /ACM19/ /onsite	CAR.B2	OK
B.3.2. Is the list of alternatives complete? (EB 55 Annex 1, §§ 67(b), 83) <i>Describe how it was validated that all alternatives are plausible and no plausible alternative is excluded from the consideration</i>	<input checked="" type="checkbox"/> All plausible alternative scenarios listed in the approved methodology have been considered. In the course of document review and site visit, it has been validated that no other alternatives which supply comparable outputs and / or services are to be taken into consideration. Thus no plausible scenario has been omitted. <input type="checkbox"/> The following alternative scenarios/options have been omitted. Corresponding CAR(s)/CL(s) has /have been issued	/PDD/ /ACM19/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	This is not applicable since there are no alternatives requirements from the methodology			
<p>B.3.3. What has been identified as the baseline scenario?</p> <p>(EB 55 Annex 1, §§ 81–82, 86)</p> <p><i>Describe the chosen BL scenario, taking into consideration the technology that would be employed and / or the activities that would take place in the absence of the proposed CDM project activity.</i></p>	<p><i>Description:</i></p> <p>The baseline is the N₂O is emitted to the atmosphere with no abatement measure being implemented.</p> <p>There are currently no national regulations in Pakistan that limit N₂O emissions from nitric acid production</p> <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the PDD and relevant documents provided on the baseline scenario.</p> <p><i>Conclusion</i></p> <p>The validation team is convinced that the baseline scenario will continue in the absence of the project activity.</p>	<p>/PDD/ /ACM19/ /X1/</p>	OK	OK
<p>B.3.4. Has the baseline scenario been determined according to the methodology?</p> <p>(EB 55 Annex 1, §§ 82, 87(e))</p> <p><i>Describe how it is validated that the identification of the most plausible baseline scenario is carried out in accordance with the applied methodology and applied methodological tools. Please refer to table A-2.</i></p>	<p>For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2.</p> <p><input checked="" type="checkbox"/> The determination has been carried out as per the procedure contained in the applied methodology.</p> <p><input type="checkbox"/> The following CARs / CLs have been identified with respect to the selection of the baseline scenario:</p>	<p>/PDD/ /ACM19/ /X1/</p>	OK	OK
<p>B.3.5. Has any plausible alternative scenario been excluded?</p> <p>(EB 55 Annex 1, § 83)</p>	<p>For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2.</p> <p><input checked="" type="checkbox"/> No plausible baseline scenario has been excluded.</p>	<p>/PDD/ ACM19/</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>Describe how it is validated that no plausible alternative scenario has been excluded.</i>	<input type="checkbox"/> The following plausible baseline scenarios have been excluded though no adequate justification has been provided for elimination. The following CARs / CLs have been issued: This is not applicable since there are no alternatives requirements from the methodology			
B.3.6. Is the identified baseline scenario reasonable and has the baseline scenario been determined using conservative assumptions where possible, including relevant references and sources? (EB 55 Annex 1, §§ 84–86(a)–(c)) <i>Describe whether the choice of the identified baseline scenario is reasonable by validating the <u>key assumptions, calculations and rationales</u> used in the PDD. Describe whether these are listed, relevant and <u>conservatively interpreted</u> in the PDD.</i>	<input checked="" type="checkbox"/> The baseline scenario is reasonable and has been determined using conservative assumptions where possible. Please refer to comments in table A-2 and sections B.3.2 to B.3.5 above. <input type="checkbox"/> The following CARs / CLs have been issued because assumptions used in the baseline determination have been assessed to be not conservative	/PDD/ /ACM19/	OK	OK
B.3.7. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations? (EB 55 Annex 1, §§ 85, 87(d)) <i>Describe whether the PP has shown that all relevant policies and circumstances have been identified and correctly considered in the PDD in accordance with the guidance by the Board. Pl. consider the guidance EB 22 annex 3</i>	<i>Description:</i> There are no national and/or sectoral policies, macro-economic trends and political aspiration in the host country for N ₂ O abatement system. <i>Justification of evidences:</i> There are currently no national regulations in Pakistan that limit N ₂ O emissions from nitric acid production <i>Conclusion:</i>	/PDD/ /ACM19/ /X1/ /onsite/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(regarding E+ and E- policies).	By means of document review and onsite interview, there are no relevant national and/or sectoral policies in the host country.			
B.3.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced? (EB 55 Annex 1, § 87(a)–(c)) <i>Describe whether the documents and sources referred to in the PDD are correctly quoted and clearly referenced.</i>	<p><i>Description:</i></p> <p>The baseline scenario is compatible with the available data and all literature and sources have clear references.</p> <p><i>Justification of evidences:</i></p> <p>The validation team had reviewed documents and conduct onsite interview.</p> <p><i>Conclusion:</i></p> <p>The baseline scenario is N₂O is emitted to the atmosphere with no N₂O abatement monitoring.</p>	/PDD/ /ACM19/ /X1/	OK	OK
B.3.9. Does the PDD contain a <i>verifiable</i> description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity. (EB 55 Annex 1, § 86)	<p><i>Description:</i></p> <p>The proposed project activity is the installation of a N₂O is emitted to the atmosphere with no abatement system.</p> <p>In the absence of the proposed CDM project activity, the N₂O is emitted to the atmosphere.</p> <p><i>Justification of evidences:</i></p>	/PDD/ /ACM19/ /onsite/	CAR.B2	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	The validation team had reviewed documents and interview project owner during the onsite visit. <i>Conclusion:</i> Refer CAR.B2.			
B.4. Additionality Determination <i>The assessment of additionality will be validated with focus on whether the project itself is not a likely baseline scenario.</i>				
B.4.1. Methodology				
B.4.1.1. Does the PDD describe how the project is additional and does the additionality justification follow the requirements of the applied methodology and/or methodological tools? (EB 55 Annex 1, §§ 67(d), 94–95) <i>Describe how it is validated that additionality justification is carried out in accordance with the applied methodology and/or applied methodological tools. Further focus your assessment on the reliability and credibility of data, rationales and assumptions, justifications and documentations provided by the PP.</i>	<i>Description:</i> According to the methodology in the absence of regulations requiring the abatement of N ₂ O emissions, the operator of the nitric acid plant has no economic incentives to take any N ₂ O abatement measures because this entails capital and operating costs but no financial benefits. Therefore, the CDM project activity is considered additional. <i>Justification of evidences:</i> Review of methodology, PDD and onsite interview. . <i>Conclusion:</i> CAR.B3: PDD Version 01 Section B.5: There is no description for additionality in accordance to the methodology.	/PDD/ /ACM19/	CAR.B3	OK
B.4.2. Consideration of CDM before project start				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>B.4.2.1. Is the project starting date reported in accordance with the CDM glossary of terms?</p> <p>(EB 55 Annex 1, § 104(a))</p> <p><i>Assess why the chosen starting date can be considered as the earliest date at which either the implementation or construction or real action of a project has begun or will begin.</i></p> <p><i>Check that no other activities related to the project that happened before the identified start date can be considered as start date. In this context please also take into consideration infrastructural expenses if they are relevant (in terms of costs and importance for the project implementation) in the specific context of the project activity.</i></p>	<p><i>Description:</i></p> <p>The project starting date is reported in the PDD section C.1.1</p> <p>The date selected is based on the start date of crediting period.</p> <p>According to the Glossary of CDM terms the starting date of the project is the earliest date at which either the implementation or construction or real actions action of the project begins.</p> <p><i>Justification of evidences:</i></p> <p>Review of PDD, purchase contract and conduct interviews during the onsite visit.</p> <p>There is no information in section B.5 of PDD for review.</p> <p><i>Conclusion:</i></p> <p>CAR.B4: The project start date was not indicated and was not according to Glossary of CDM terms as reporte din Section C.1.1</p>	<p>/PDD/ /GCDM/</p>	<p>CAR.B4</p>	<p>OK</p>
<p>B.4.2.2. In case the project start date is on or after 2nd August 2008 has the PP informed the DNA and UNFCCC about the intension to seek CDM status?</p> <p>(EB 55 Annex 1, §§ 99–101)</p> <p><i>Describe whether such a notification has been provided by the project participants within six months of the project activity start date; if NOT it shall be determined that the CDM was not seriously considered.</i></p>	<p><i>Description:</i></p> <p>The project start date reported PDD section C.1.1 is 2012-01-01. However, no notifications were submitted to the UNFCCC and DNA.</p> <p><i>Justification of evidences:</i></p> <p>Review of PDD, relevant documentations and onsite interview during onsite visit, it was found the project start date was 2007-10-26, the date when the contract for the N₂O abatement system was signed.</p> <p><i>Conclusion:</i></p>	<p>/PDD/ /B1/ /GCDM/</p>	<p>CAR.B4</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	By means of document review, the project state date was 2007-10-26. Refer to CAR.B4.			
<p>B.4.2.3. In case the project start date is before commencing of validation and 2nd August 2008, was the incentive from the CDM seriously considered and are details given in the PDD?</p> <p>(EB 55 Annex 1, §§ 100, 102) <i>Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.</i></p>	<p><i>Description:</i> Based on the hosted version of the PDD section C.1.1, the project start date is 2012-01-01 which is after 2008-08-02. However, further review of documents, the project start date was 2007-10-26 which is before 2008-08-02. Therefore, the incentives for CDM have not been demonstrated in section B.5 of PDD.</p> <p><i>Justification of evidences:</i> Review of PDD, Board Resolution and interview during the on-site visit.</p> <p><i>Conclusion:</i> Refer to CAR.B4</p>	<p>/PDD/ /GCDM/ /B1/</p>	CAR.B4	OK
<p>B.4.2.4. How and when was the decision to proceed with the project taken? <i>Describe the steps taken to validate the starting date.</i></p>	<p><i>Description:</i> The date of the board decision is not described in section B.5 of PDD.</p> <p><i>Justification of evidences:</i> Based on document review, the board of directors' resolution date was 2007-08-22, which is the date of the board assign the CEO to purchase the abatement system and develop as a CDM project..</p> <p><i>Conclusion:</i> Refer CAR.B4</p>	<p>/PDD/ /B2/</p>	CAR.B4	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>B.4.2.5. Is the project start date consistent with the available evidences? (EB 55 Annex 1, § 102)</p> <p><i>Describe the evidence assessed regarding the prior consideration of the CDM (if necessary). Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.</i></p>	<p><i>Description:</i> Refer to B.4.2.1</p> <p><i>Justification of evidences:</i> Refer to B.4.2.1</p> <p><i>Conclusion:</i> Refer to CAR.B4</p>	/PDD/	CAR.B4	OK
<p>B.4.2.6. Was the decision to proceed with the project taken by a person which has the authority to do so? (EB 55 Annex 1, § 102(a))</p> <p><i>Describe the steps taken to validate this issue.</i></p>	<p><i>Description:</i> The decision to proceed with project was taken by the Board of Directors.</p> <p><i>Justification of evidences:</i> The validation team has reviewed the Board Directors resolution to confirm CDM has been considered to proceed in the investment of the project. The BOD resolution was signed by the company secretary dated 2007-08-22.</p> <p><i>Conclusion:</i> The decision to proceed with the project was taken by the board of directors</p>	/PDD/ /B2/	OK	OK
<p>B.4.2.7. How was the CDM involved in the decision making process? (EB 55 Annex 1, § 102)</p> <p><i>Describe why CDM was a decisive factor in the decision</i></p>	<p><i>Description:</i> According to the PDD, the Board agreed to undertake the project as a CDM project activity in order to have financial benefits to implement the project activity</p>	/PDD/ /B2/ /B4/ /unfccc/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>making process.</i>	<p>The project owner has a registered project for similar N₂O abatement. Therefore, they considered applying CDM status for the project activity by discussing with potential CDM project developers and CER buyers even before the plant was constructed.</p> <p><i>Justification of evidences:</i></p> <p>By means for documents review, onsite interview and cross-checked at UNFCCC website, the CDM involvement in the decision making process has been assessed</p> <p>http://cdm.unfccc.int/Projects/DB/TUEV-SUED1155134039.49/view</p> <p><i>Conclusion:</i></p> <p>Therefore, CDM has been considered in the decision making process before the Board of Directors resolution. In addition, the resolution has authorised to pursue CDM for the nitric acid plant abatement system.</p>			
<p>B.4.2.8. Do the evidences provided doubtlessly prove that continuous and real actions were taken in order to secure the CDM status?</p> <p>(EB 55 Annex 1, § 102; EB 49 Annex 22 § 7)</p>	<p><i>Description:</i></p> <p>The discussions with CERs buyers, CDM project developers, 3 submissions of methodology revisions and an appeal letter to EB are continuous real action taken by the project owner to secure CDM status for the project.</p> <p><i>Justification of evidences:</i></p> <p>During the on-site visit, the validation team had reviewed the following:</p>	<p>/PDD/ /B2/ /B4/ /B5/ /B6/ /B7/ /B8/</p>	GAR.B5	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<p>5. Board Resolution</p> <p>6. Revisions of methodology</p> <p>7. Various communications with project consultant, equipment suppliers, technology providers from 2006-09-20 to 2011-05-02</p> <p>8. Appeal letter to EB UNFCCC</p> <p><i>Conclusion:</i></p> <p>Therefore, the actions to secure the project as CDM status had been continuous since 2006-09-20 to 2011-05-02 however, the following is found.</p> <p>CAR.B5: PDD Version 01 Section B.5: The CDM prior consideration was not demonstrated.</p>			
<p>B.4.2.9. Is the gap of documented evidences to secure the CDM status less than 3 years and are the evidences relevant for substantiating the action taken, credible, reliable and complete?</p> <p>(EB 49 Annex 22 § 8)</p>	<p><i>Description:</i></p> <p>From the review of the documented evidences, to secure CDM benefits, it has been continuous since 2007-11-08 with Mitsubishi Corporation on revision of methodology AM0028. The gap for each evidences reviewed is less than 3 years.</p> <p><i>Justification of evidences:</i></p> <p>By means of documented emails review during the on-site and interview of project owner.</p> <p>The validation team has checked the following during the onsite visit:</p>	<p>/PDD/ /B4/ /B5/ /B8/</p>	<p>CAR.B5</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<ol style="list-style-type: none"> 1. 1st communication with Cargill, CERs buyer on 2006-09-20 2. Communications with Mitsubishi regarding revision of methodology starts from October 2006 and the 1st revision submitted on 2008-05-06 3. When the 1st revision was rejected on 2008-06-27, a 2nd submission was made on 2008-09-19. It was again rejected on 2009-05-08 4. A 3rd submission was made on 2009-07-28 and was rejected on 2009-09-19 5. An appeal letter was submitted to EB on 2010-11-16. 6. On 2011-03-15, received news from Uhde, technology provider a new methodology will be developed that will be applicable for the project activity. 7. On 2011-05-02, the process for developing the project as CDM begins. <p><i>Conclusion:</i></p> <p>From the the various activities stated as above, it has been continuous and does not has a 3 years gap for each activity.</p> <p>According to the EB62 Annex 13, there is no gap which is more than 3 years from the start of the project activity. Hence the project can be considered to have serious CDM consideration.</p> <p>(Also refer to CAR.B5)</p>			
B.4.2.10. Did implementation of the project ceased after its commencement and did implementation recommence after consideration of the CDM?	<p><i>Description:</i></p> <p>The PDD did not indicate any ceasing of the project activity after the start date of the project activity.</p> <p><i>Justification of evidences:</i></p>	/PDD/ /B4/ /B5/ /B8/	CAR.B5	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 51 Annex 58, § 7) <i>Describe the reasons for ceasing the project and explain why the incentive from CDM was necessary to recommence the implementation.</i>	Refer to B.4.2.1, B.4.2.2 and B.4.2.3 <i>Conclusion:</i> The project did not cease after the start date. However, refer to CAR.B4			
B.4.2.11. Can the CDM involvement in the decision assessed as serious? (EB 55 Annex 1, § 104(b)–(c)) <i>Describe whether or not the project would have been undertaken without the incentive of the CDM.</i>	<i>Description:</i> , CDM involvement in the decision has been taken seriously by the project owner. The proposed project activity will not be implemented without CDM benefits <i>Justification of evidences:</i> Refer to B.4.2.3 above, The decision to implement the project with CDM status is made by the Board of Directors. <i>Conclusion:</i> The decision made to implement the project with CDM status has been demonstrated seriously.	/PDD/ /B4/ /B5/ /B8/	OK	OK
B.4.3. Identification of alternatives Step 1 (in case of SSC projects pl. skip steps 1 and 2 if appropriate)				
B.4.3.1. Does the list of alternatives contain the status-quo situation, the project not undertaken as a CDM project as well as all other viable means of supplying the	<i>Description:</i> There is no requirement by the methodology <i>Justification of evidences:</i>	/PDD/ /ACM19/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>outputs or services that are to be supplied by the proposed CDM project activity?</p> <p>(EB 55 Annex 1, §§ 105–107) <i>Describe the steps taken to validate this issue on the basis of your local and sectoral knowledge.</i></p>	<p><i>Conclusion:</i></p>			
<p>B.4.3.2. Have all realistic alternatives been identified to the project?</p> <p>(EB 55 Annex 1, §§ 105–107) <i>Describe whether the list of alternatives is credible and complete. Describe how it is validated that the alternatives are realistic.</i></p>	<p><i>Description:</i> There is no requirement by the methodology</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.4.3.3. Do all identified alternatives comply with enforced legislations?</p> <p>(EB 55 Annex 1, §§ 106(c)) <i>Describe the steps taken to validate this issue. Refer to the legislations.</i></p>	<p><i>Description:</i> There is no requirement by the methodology</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.4.4. Investment analysis Step 2</p> <p><i>In case the investment analysis as per step 2 is chosen to justify the additionality Annex 2 "Assessment of Financial Parameters" has to be used to provide additional details of the the calculation parameters..</i></p>				
<p>B.4.4.1. Does the PDD provide evidence that the</p>	<p><i>Description:</i></p>	<p>/PDD/</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>project would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs?</p> <p>(EB 55 Annex 1, § 108)</p>	<p>In accordance to the methodology, in the absence of regulations requiring the abatement of N₂O emissions, the operator of the nitric acid plant has no economic incentives to take any N₂O abatement measures because this entails capital and operating costs but no financial benefits. Therefore, the CDM project activity is considered additional. No investment analysis is required for the proposed CDM project activity</p> <p><i>Justification of evidences:</i></p> <p>Review of PDD and methodology</p> <p><i>Conclusion:</i></p> <p>In accordance to methodology no investment analysis is required.</p>	<p>/ACM19/</p>		
<p>B.4.4.2. Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or benchmark analysis)?</p> <p>(EB 55 Annex 1, § 108; EB 39 Annex 10)</p> <p><i>Describe why the selected analysis method is appropriate under consideration of potential revenues and costs, potential project alternatives and potential available benchmark values.</i></p>	<p><i>Description:</i></p> <p>Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	<p>OK</p>	<p>OK</p>
<p>B.4.4.3. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation?</p> <p>(EB 55 Annex 1, § 110; EB 51, Annex 58, §8)</p>	<p><i>Description:</i></p> <p>Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p>	<p>/PDD/ /ACM19/</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>Describe the steps taken to validate this issue.</i>	<i>Conclusion:</i>			
<p>B.4.4.4. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58 § 3 – 4) <i>Describe how the technical lifetime / period chosen for calculating financial parameter(s) is reviewed and which documents were utilised in the course of review. Describe furthermore the approach used to check the inclusion of a potential fair value.</i></p>	<p><i>Description:</i> Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	<p>OK</p>	<p>OK</p>
<p>B.4.4.5. Is the (remaining) technical lifetime of existing or project equipment defined in accordance with the guidance of the <i>Tool to determine the remaining lifetime of equipment?</i></p> <p>(EB 50 Annex 15)</p>	<p><i>Description:</i> Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	<p>OK</p>	<p>OK</p>
<p>B.4.4.6. Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice?</p>	<p><i>Description:</i> Refer to B.4.4.1 above</p>	<p>/PDD/ /ACM19/</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 55 Annex 1, § 109; EB 51 Annex 58, § 4) <i>State the accounting regulations applied for calculating the fair value and describe why these are applicable under the project specific circumstances. Describe potential mismatches between regulations and the approach applied for calculating the fair value.</i>	<i>Justification of evidences:</i> <i>Conclusion:</i>			
B.4.4.7. Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation? (EB 55 Annex 1, § 109; EB 51 Annex 58, § 4)	<i>Description:</i> Refer to B.4.4.1 above <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK
B.4.4.8. Are depreciation and other non-cash related items added back to net profits for the purpose to calculate the financial indicator? (EB 55 Annex 1, § 109; EB 51 Annex 58, § 5)	<i>Description:</i> Refer to B.4.4.1 above <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK
B.4.4.9. Is taxation excluded in the investment analysis or is the benchmark intended for post tax comparisons? (EB 55 Annex 1, § 109; EB 51 Annex 58, § 5)	<i>Description:</i> Refer to B.4.4.1 above <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>B.4.4.10. Were the input values used in the investment analysis valid and applicable at the time of the investment decision?</p> <p>(EB 55 Annex 1, § 109,112; EB 51 Annex 58, § 6)</p> <p><i>In case the basis for input values is a Feasibility Study Report (FSR) describe how it has been ensured that the period in time between the finalisation of the FSR and the investment decision is sufficiently short so that it is unlikely that input values would have materially changed. Further confirm the consistency of values in FSR and PDD.</i></p>	<p><i>Description:</i></p> <p>Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.4.4.11. Is the plant load factor (PLF) chosen in a conservative manner, taking into account that the PLF may be different in the framework of demonstrating additionality and calculating the ex-ante ER?</p> <p>(EB 48, Annex 11)</p>	<p><i>Description:</i></p> <p>Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.4.4.12. In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58, § 9)</p>	<p><i>Description:</i></p> <p>Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.4.4.13. In cases where a post-tax benchmark is applied please ensure that actual interest payable is taken into account in the</p>	<p><i>Description:</i></p> <p>Refer to B.4.4.1 above</p>	<p>/PDD/ /ACM19/</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>calculation of income tax.</p> <p>(EB 51 Annex 58, § 11)</p> <p><i>As per the guidance it is recommended to select a pre tax benchmark in order to Describe the steps taken in assessing this requirement.</i></p>	<p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>			
<p>B.4.4.14. In case of equity IRR: Is the part of the investment costs, which is financed by equity considered as net cash outflow and is the part financed by debt excluded in net cash outflow?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58, § 10)</p>	<p><i>Description:</i></p> <p>Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.4.4.15. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)?</p> <p>(EB 55 Annex 1, § 111; EB 51 Annex 58, §§12 – 15)</p> <p><i>In case risk premiums are applied precisely describe its suitability to reflect the risks associated with the project activity, considering the project type and market situation.</i></p>	<p><i>Description:</i></p> <p>Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.4.4.16. Is the benchmark value suitable for the project activity and is it reasonable to assume that no investment would be made</p>	<p><i>Description:</i></p> <p>Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>at a rate of a lower return than the benchmark?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58, §§13 – 15) <i>Describe whether it is reasonable to assume that a lower rate of return would consequently result in the baseline scenario.</i></p>	<p><i>Conclusion:</i></p>			
<p>B.4.4.17. Is it ensured that the project cannot be developed by other developers than the PP?</p> <p>(EB 55 Annex 1 § 109; EB 51 Annex 58, §§ 13 – 14) <i>Describe why the benchmark does not include the subjective profitability expectations or risk profile of the project developer. If applicable assess the past financial behavior of the entity during at least the last 3 years in relation to similar projects.</i></p>	<p><i>Description:</i> Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.4.4.18. Was the benchmark consistently used in the past for similar projects with similar risks?</p> <p>(EB 55 Annex 1, § 112(c))</p>	<p><i>Description:</i> Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK
<p>B.4.4.19. Does the PDD and related spreadsheets contain a sensitivity analysis and does the same contain variation of parameters which may vary throughout the project lifetime,</p>	<p><i>Description:</i> Refer to B.4.4.1 above</p> <p><i>Justification of evidences:</i></p>	<p>/PDD/ /ACM19/</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 55 Annex 1, §§ 109–110(e); EB 51 Annex 58, § 17–18) <i>Describe relevance of parameters used in the sensitivity analysis as well as their likeliness to vary during the project's lifetime. Parameters which are fixed on the basis of contracts, PPAs etc. may not be subject to variation and not adequate.</i>	<i>Conclusion:</i>			
B.4.4.20. Were only variables that constitute more than 20% of either total project costs or total project revenues subjected to reasonable variation? (EB 55 Annex 1, § 109; EB 51 Annex 58, § 17)	<i>Description:</i> Refer to B.4.4.1 above <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK
B.4.4.21. Have parameters, constituting less than 20% of total project costs or revenues, been identified with potential material impact on the financial parameter? (EB 55 Annex 1, § 109; EB 51 Annex 58, § 17) <i>Describe whether those parameters are considered in the sensitivity analysis?</i>	<i>Description:</i> Refer to B.4.4.1 above <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK
B.4.4.22. Is the range of variation reasonable in the specific context of the project activity, taking into consideration historic trends in the business sector? (EB 55 Annex 1, § 109; EB 51 Annex 58, § 18)	<i>Description:</i> Refer to B.4.4.1 above <i>Justification of evidences:</i>	/PDD/ /ACM19/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>Describe whether the range of variation is appropriate with focus on historic developments, e.g. price of oil / labour etc., energy potential in the region in question.</i>	<i>Conclusion:</i>			
B.4.5. Barrier analysis Step 3 or SSC additionality assessment				
<p>B.4.5.1. Are there any barriers given which have a clear and direct impact on the financial returns of the project?</p> <p>(EB 55 Annex 1, §§ 115, 134, 137)</p> <p><i>In case of LSC projects those issues cannot be considered as barriers and shall be assessed in the investment analysis. In case of SSC projects the same fundamentals as for LSC projects shall apply, i.e. the assessment of the investment barrier according to EB 51 Annex 58.</i></p>	<p><i>Description:</i></p> <p>In accordance to the methodology, in the absence of regulations requiring the abatement of N₂O emissions, the operator of the nitric acid plant has no economic incentives to take any N₂O abatement measures because this entails capital and operating costs but no financial benefits. Therefore, the CDM project activity is considered additional and no barrier analysis is required.</p> <p><i>Justification of evidences:</i></p> <p>N/A</p> <p><i>Conclusion:</i></p>	/PDD/ /ACM19/	OK	OK
<p>B.4.5.2. Are the barriers described risk related (e.g technology failure, other performance related risks)?</p> <p>(EB 55 Annex 1, §§ 116, 134, 137)</p> <p><i>Are there other barriers or barriers due to prevailing practice existent which would have led to higher emissions?</i></p>	<p><i>Description:</i></p> <p>N/A</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	/PDD/ /ACM19/	OK	OK
<p>B.4.5.3. Has the unavailability of means of finance for the project been described and adequately substantiated? Do evidences</p>	<p><i>Description:</i></p> <p>N/A</p>	/PDD/ /ACM19/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
doubtlessly prove that the financing of the project was assured only due to the benefit of the CDM? (EB 55 Annex 1, §§ 116, 137, EB 50 Annex 13, § 9)	<i>Justification of evidences:</i> <i>Conclusion:</i>			
B.4.5.4. How is it justified and evidenced that the barriers given in the PDD are real? (EB 55 Annex 1, § 116(a))	<i>Description:</i> N/A <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK
B.4.5.5. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity and do not prevent the implementation of at least one of the alternatives? (EB 55 Annex 1, § 116(b))	<i>Description:</i> N/A <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK
B.4.5.6. Does the review of relevant background information on the nature of the company(ies) and entity(ies) involved in the financing and implementation of the project sufficiently justify that the barriers related to the lack of access to capital, technologies and skilled labour are real? (EB 50 Annex 13, § 4)	<i>Description:</i> N/A <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>B.4.5.7. Has it been demonstrated in an objective way how the CDM alleviates each of the identified barriers to a level that the project is not prevented anymore from occurring by any of the barriers?</p> <p>(EB 50 Annex 13, § 5)</p>	<p><i>Description:</i> N/A</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	/PDD/ /ACM19/	OK	OK
<p>B.4.5.8. Would provision of additional financial means lead to the mitigation of the barrier(s) demonstrated?</p> <p>(EB 50 Annex 13, § 7)</p> <p><i>Describe why provision of additional financial means would not lead to mitigation of the barrier(s) demonstrated and hence analysing the project's additionality within the framework of an investment analysis is inappropriate. .</i></p>	<p><i>Description:</i> N/A</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	/PDD/ /ACM19/	OK	OK
<p>B.4.6. Common practice analysis Step 4 (in case of SSC projects skip this step)</p>				
<p>B.4.6.1. Is the defined region for the common practice analysis appropriate for the technology/industry type?</p> <p>(EB 55 Annex 1, § 120(a))</p> <p><i>Describe why the project activity is not common practice in a transparent and unambiguous manner. If a region other than the entire host country is chosen, describe why this region is more appropriate.</i></p>	<p><i>Description:</i></p> <p>In accordance to the methodology, in the absence of regulations requiring the abatement of N₂O emissions, the operator of the nitric acid plant has no economic incentives to take any N₂O abatement measures because this entails capital and operating costs but no financial benefits. Therefore, the CDM project activity is considered additional and no common practice analysis is required.</p> <p><i>Justification of evidences:</i></p>	/PDD/ /ACM19/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<i>Conclusion:</i>			
B.4.6.2. To what extent similar projects have been undertaken in the relevant region? (EB 55 Annex 1, § 120(b))	<i>Description:</i> N/A <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK
B.4.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences are observed? (EB 55 Annex 1, § 120(c))	<i>Description:</i> N/A <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /ACM19/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.5. Ex-Ante Calculation of GHG Emission Reductions <i>It is assessed whether the ex-ante calculations of project emissions, baseline emissions, leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified. Furthermore calculation of emission reductions shall be assessed.</i>				
<p>B.5.1. Are the equations applied correctly according to the applied approved methodology?</p> <p>(EB 55 Annex 1, §§ 67(c), 89–90, 92)</p> <p><i>Describe clearly the steps taken to assess whether the methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. Further take into consideration that all estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.</i></p>	<p><input type="checkbox"/> The equations applied for calculation are correctly applied according to the approved methodology.</p> <p><input checked="" type="checkbox"/> The following mistakes have been identified in this context:</p> <p>CAR.B6: PDD Version 01 Section B.6.1: The determinations of project emissions were not demonstrated and explained according to the methodology.</p> <ol style="list-style-type: none"> 1. Project emissions of N₂O from the project plant ($PE_{N_2O,n}$). 2. Determination of $Q_{N_2O,tail\ gas,n}$. 3. Determination of $Q_{N_2O,by-pass,n}$. 4. Project emissions from the operation of the tertiary N₂O abatement facility ($PE_{CO_2,tertiary,n}$) <p>CAR.B7: PDD version 01 Section B.6.3:</p> <ol style="list-style-type: none"> 1. ER calculation spreadsheet did not indicate the source of the data applied in both the calculations and catalyst 	<p>/PDD/ /ACM19/ /F6/</p>	<p>CAR.B6</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	assumption tabs. 2. The formulae applied are not indicated			
<p>B.5.2. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)?</p> <p>(EB 55 Annex 1, §§ 90–91) <i>Assess the correct selection and application of methodological choices. Describe whether proper justification has been provided (based on the choice of the baseline scenario, context of the project activity and other evidence provided) and whether the correct equations have been used reflecting the relevant methodological choices.</i></p>	<p><i>Description:</i> The methodology does not link to another methodology choice and does not provide different approaches and choices. However, the Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion allows choices.</p> <p><i>Justification of evidences:</i> Review of the methodology, PDD and relevant applicable tools did not indicate any other methodological choices.</p> <p><i>Conclusion:</i> By means of document review, the methodological choice is selected according to the applied methodology and relevant tools</p>	<p>/PDD/ /ACM19/ /TFFC/ /TMF/</p>	OK	OK
<p>B.5.3. Have conservative assumptions been used when calculating the project emissions?</p> <p>(EB 55 Annex 1, §§ 90–91) <i>Describe clearly the steps taken to assess whether all the assumptions and data used by the PP are listed in the PDD including references and sources and are conservatively interpreted in the PDD.</i></p>	<p><i>Description:</i> According to the applied methodology, the expected project emissions during the project implementation are:</p> <ol style="list-style-type: none"> 1. CO₂ from the operation of the tertiary N₂O abatement facility 2. N₂O released through the tail gas of the project plant to the atmosphere 3. N₂O released through the by-pass to a tertiary N₂O abatement system to the atmosphere <p><i>Justification of evidences</i></p>	<p>/PDD/ /ACM19/ /onsite</p>	CAR.B8	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	By means of document review and on-site interview with the project owner. <i>Conclusion:</i> CAR.B8: PDD version 01 Section B.6.2: There are several parameters not demonstrated with regard to the fuel as required by the "Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion".			
B.5.4. Does the implementation of the project activity lead to GHG emissions within the project boundary which are expected to contribute more than 1% of the overall expected average annual emission reductions, which are not addressed by the methodology? (EB 55 Annex 1, § 77)	<i>Description:</i> There are no other GHG emissions within the project activity boundary that will contribute more than 1% of the overall expected annual emission reductions. <i>Justification of evidences:</i> Review of PDD, methodology and onsite interview of project owner and consultant <i>Conclusion:</i> By means of document review, there are no other GHG emissions that will contribute more than 1% within the project boundary	/PDD/ /ACM19/ /onsite/	OK	OK
B.5.4.1. Has a plant load factor (PLF) been defined ex-ante and considered for determination of baseline emissions? (EB 48 Annex 11, §§ 1, 3–4) <i>Describe why the PLF is conservative in the framework of calculating emissions reductions and whether the PLF is the same in the framework of demonstrating additionality by applying the</i>	<i>Description:</i> According to the technical description of the abatement system, the guaranteed reduction efficiency is 94%. The capacity of the nitric acid plant is 1,500t/d operating at 24 h/d of 100% nitric acid. <i>Justification of evidences:</i>	/PDD/ /ACM19/ /C5/ /A3/	CL.B9	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>investment analysis. Note, in order to be conservative in both cases the PLF may be different.</i>	<p>Review of PDD, nitric acid plant design specification and abatement system technical specifications.</p> <p><i>Conclusion:</i></p> <p>The reduction efficiency is guaranteed at 94%.</p> <p>The nitric plant is according to the design specification of 1,500t/d operating at 24 h/d.</p> <p>However, refer to CL.B9 (3)</p>			
<p>B.5.5. Are all data sources and assumptions appropriate and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions?</p> <p>(EB 55 Annex 1, § 91)</p> <p><i>Describe clearly the steps taken to assess whether the values used for the fixed parameters are considered reasonable, correct and applicable in the context of the project activity. Check esp. chapter 6.2 of the PDD.</i></p>	<p><i>Description:</i></p> <p>The ex-ante data and parameter are stated in section B.6.2 of PDD and remain fixed through the crediting period.</p> <p><i>Justification of evidences:</i></p> <p>Review of PDD, methodology and relevant tools</p> <p><i>Conclusion:</i></p> <p>CL.B9: PDD version 01 Section B.6.3; The PP is requested to substantiate the following:</p> <ol style="list-style-type: none"> 1. Assumption of 1,500 t/d is based on 100% and should be explain 2. Annual operating days of 330 3. Reduction efficiency of 98%. 4. The 11,045 tCO₂e estimation for the operation of the tertiary system 	<p>/PDD/ /ACM19/ /F6/ /F5/ /TFFC/ /TMF/</p>	CL.B9	OK
B.5.6. Are all ex-ante calculation values for	<input type="checkbox"/> All "Values of data to be applied for the purpose of calculating	/PDD/	CL.B9	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>monitoring parameters (as defined as per chapter B.7.1) reasonable?</p> <p>(EB 55 Annex 1, § 91)</p> <p><i>Describe clearly the steps taken to assess whether the values used for the monitoring parameters are considered reasonable, applicable and conservative in the context of the project activity</i></p>	<p>expected emissions reductions” are considered to be reasonable, applicable and conservative.</p> <p><input checked="" type="checkbox"/> The following mistakes have been identified in this context:</p> <p>Refer CL.B9</p>	<p>/ACM19/ /C2/ /C5/ /F6/ /F5/</p>		
<p>B.5.7. Are the emission reductions real, measurable and give long-term benefits related to the mitigation of climate change.</p> <p><i>Describe the steps taken to validate this issue.</i></p>	<p><i>Description:</i></p> <p>The emission reductions are real, measurable and give long-term benefits related to the mitigation of climate change.</p> <p>In the absence of the project activity N₂O will be released into the atmosphere.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has interviewed the project owner, project consultants and review of project description, technology and proposed equipment for the abatement system.</p> <p><i>Conclusion:</i></p> <p>By means of document review, the project activity will give long term benefits to mitigate climate change,</p>	<p>/PDD/ /C2/ /C5/ /F6/ /F5/</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.6. Monitoring of Emission Reductions <i>It is assessed whether the monitoring plan is appropriate for the project activity and in line with the applied methodology.</i>				
<p>B.6.1. Are all monitoring parameters required by the applied methodology contained in the monitoring plan?</p> <p>(EB 55 Annex 1, §§ 67(e), 121, 123(a), 124) <i>Assess whether all applicable parameters listed in the methodology are included in the monitoring plan.</i></p> <p><i>Pl. check further whether the selection of parameters not to be monitored (section B.6.2) is appropriate and in line with the applied methodology.</i></p> <p><i>In case of different approaches can be chosen acc. to the methodology assess whether the selection of parameters is justified and correct.</i></p>	<p><i>Description:</i></p> <p>The parameters to be monitored are included in the monitoring plan. .</p> <p><i>Justification of evidences:</i></p> <p>Review of Section B.7.1 of PDD with methodology and relevant tools</p> <p><i>Conclusion:</i></p> <p>CAR.B10: PDD version 01 Section B.7.1: Correction requested for several parameters that were not monitored in accordance to methodology and tools applied.</p>	<p>/PDD/ /ACM19/ /TFFC/ /TMF/</p>	<p>CAR.B9</p>	<p>OK</p>
<p>B.6.2. Are the means of monitoring of all parameters contained in the monitoring plan feasible and in accordance with the requirements of the applied methodology?</p> <p>(EB 55 Annex 1, § 123(a)–(b), 124) <i>Assess whether the provided information for all parameters w.r.t.</i></p>	<p><i>Description:</i></p> <p>The parameters contained in the monitoring are feasible. It has a label, data unit, description, source of data, measurement equipment and monitoring frequency.</p> <p>However, several parameters measurement method, source and monitoring frequency are not indicated clearly</p> <p><i>Justification of evidences:</i></p>	<p>/PDD/ /ACM19</p>	<p>CAR.B40 CAR.B6</p>	<p>OK OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>a) <i>Label (name of the data / parameter)</i> b) <i>data unit</i> c) <i>description</i> d) <i>source of data</i> e) <i>measurement equipment / method / procedure</i> f) <i>monitoring frequency</i> g) <i>QA/QC procedures</i></p> <p><i>are appropriately described and in compliance with the requirements of the methodology..</i></p>	<p>Section B.7.1 and B.7.2 of PDD has been reviewed for the necessary and relevant information.</p> <p><i>Conclusion:</i> Refer to CAR.B10 and CAR.B6</p>			
<p>B.6.3. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology?</p> <p>(EB 55 Annex 1, §§ 123(b), 124)</p> <p><i>Check whether all necessary equations have been provided in the PDD. Pl. consider that ex-post and ex-ante calculations might be different.</i></p> <p><i>Please consider that additional equations might be necessary to calculate auxiliary parameters.</i></p>	<p><i>Description:</i></p> <p>The equations applied for ex-post emissions reduction calculation are in accordance with the methodology and relevant tools</p> <p><i>Justification of evidences:</i></p> <p>Review of PDD. ER calculation, methodology and relevant tools</p> <p><i>Conclusion:</i></p> <p>However, please refer to CAR.B7</p>	<p>/PDD/ /ACM19/ /F6/ /TFFC/ /TMF/</p>	CAR.B7	OK
<p>B.6.4. Is it likely that the monitoring arrangements described in the PDD can properly be implemented in the context of the project</p>	<p><i>Description:</i></p> <p>The monitoring arrangement as described in section B.7.2 of PDD</p>	<p>/PDD/ /ACM19/</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>activity?</p> <p>(EB 55 Annex 1, § 124(c))</p> <p><i>Assess whether the described monitoring arrangements are sufficient and realistic to enable a thorough monitoring. Pl. consider also special monitoring conditions, e.g. downtimes of monitoring equipment etc.</i></p>	<p>will be implemented.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has interviewed project owners and carbon consultant during the on-site visit for the understanding of the implementation of the monitoring during operations. QA/QC procedures will adopt EN14181 (2004) "Stationary source emissions - Quality assurance of automated measuring systems" to monitor the project when begins operation.</p> <p><i>Conclusion:</i></p> <p>The validation team is convinced, the monitoring plan will be implemented accordingly.</p>	/EN/		
<p>B.6.5. Are the QA/QC procedures appropriate sufficient to ensure the emission reductions achieved from the project activit can be reported ex-post and verified?</p> <p>(EB 55 Annex 1, § 124(b))</p> <p><i>Please consider the description given in section B.7.2. Describe which QA/QC provisions are considered. Address Quality Management System provisions, calibration and maintenance of equipment. Address further any review procedures.</i></p>	<p><i>Description:</i></p> <p>A brief outline of the QA procedures has been addressed in Section B.7.2 of PDD to ensure the emission reductions will be achieved when the project activity begins operation.</p> <p><i>Justification of evidences:</i></p> <p>Section B.7.2 of PDD described briefly the QA/QC procedures. During the on-site visit, the project developer has been interviewed about relevant QA/QC procedures. EN14181 (2004) "Stationary source emissions - Quality assurance of automated measuring systems" will be adopted to monitor the project when begins operation.</p> <p><i>Conclusion:</i></p> <p>The relevant sections of PDD have addressed the necessary and relevant procedures and deemed appropriate.</p>	/PDD/ /ACM19 /EN/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>B.6.6. Are procedures identified for data management?</p> <p>(EB 55 Annex 1, § 124(b))</p> <p><i>Check whether appropriate provisions are considered for data management including responsibilities, what records to keep, storage area of records and how to process performance documentation</i></p> <p><i>Check further the data archiving provisions for the project activity and ensure that provisions are made to archive data for the whole crediting period + 2 years.</i></p>	<p><i>Description:</i></p> <p>Section B.7.2 of PDD has indentified data management.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the respective section of PDD and interviewed the project developer on data management.</p> <p>A brief organisation structure has been included in Section B.7.2 of PDD..</p> <p><i>Conclusion:</i></p> <p>CAR.B11: PDD version 01, Section B.7.2: There are no information on Data Management, Archiving and Storage.</p> <p>FAR.B12: PDD version 01 Section B.7.2: The monitoring procedures are not developed yet to monitor the project activity. This will be checked during the 1st verification.</p>	<p>/PDD/</p>	<p>CAR.B11 FAR.B12</p>	<p>OK FAR.B12</p>
<p>C. Duration of the Project/ Crediting Period</p> <p><i>It is assessed whether the temporary boundaries of the project are clearly defined.</i></p>				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>C.1. Is the project's starting date clearly defined and evidenced?</p> <p>(EB 55 Annex 1, § 99)</p> <p><i>Check whether the starting date is correct. Apply the definition of the project starting date as per the "Glossary of CDM terms".</i></p>	<p><i>Description:</i></p> <p>The project start date defined in Section C.1.1 of the hosted PDD is the date for the start of crediting period as 2012-01-01.</p> <p><i>Justification of evidences:</i></p> <p>By document review of the contract and other relevant documents to confirm the date stated in the PDD.</p> <p><i>Conclusion:</i></p> <p>CL.C1: PDD version 01 Section C.1.1: The project starting date has not been defined in accordance to the latest Glossary of CDM Terms..</p>	<p>/PDD/ /B1/</p>	<p>CL.C1</p>	<p>OK</p>
<p>C.2. Is the project's operational lifetime clearly defined and evidenced?</p> <p><i>Check whether the project lifetime is correctly defined. Consider the guidance on the assessment of investment analysis (annex to the additionality tool).</i></p> <p><i>Check in case of phased implementation this has been reflected throughout the whole PDD incl. the financial assessment, if applicable.</i></p>	<p><i>Description:</i></p> <p>The project operational lifetime stated in Section C.1.2 of PDD is 25 years which is the lifetime of the nitric acid plant.</p> <p><i>Justification of evidences:</i></p> <p>By means of document review to check on the consistent of the number years stated in PDD and relevant documents.</p> <p><i>Conclusion:</i></p> <p>Based on the validation team industry expert knowledge, the team concludes the operational life time is considered appropriate.</p>	<p>/PDD/ /onsite/</p>	<p>OK</p>	<p>OK</p>
<p>C.3. Is the start of the crediting period clearly defined and reasonable?</p> <p><i>Check whether the envisaged starting date of the crediting</i></p>	<p><i>Description:</i></p> <p>The start of the crediting period stated in Section C.2.1.1 of PDD is 2012-01-01.</p>	<p>/PDD/ /onsite/</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>period is realistic, taking into consideration the times needed for validation and registration.</i>	<p><i>Justification of evidences:</i></p> <p>From the on-site interview with project owners and review of project progress, the start date of the crediting period is realistic.</p> <p><i>Conclusion:</i></p> <p>The validation team is convinced the starting date of the crediting period is reasonable.</p>			
<p>D. Environmental Impacts</p> <p><i>Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the DOE.</i></p>				
<p>D.1.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)? (EB 55 Annex 1, §§ 131–133) <i>Check the host party regulations, regarding EIA.</i></p>	<p><i>Description:</i></p> <p>An EIA was conducted for the fertiliser complex and approved for construction and operation by the Government of Punjab dated 2010-08-18 and</p> <p>The project activity is located at the nitric plant which is part of the complex.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the approvals for construction and operation of the complex.</p> <p><i>Conclusion:</i></p> <p>Although the fertiliser complex has obtained operational approval, it is not clear whether it covers the project activity.</p>	<p>/PDD/ /A2/</p>	<p>CL-D1</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	CL.D1: PDD version 1.0, Section D.2: The PP is request to clarify why an EIA is not required for the project activity.			
<p>D.1.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applicable duly approved?</p> <p>(EB 55 Annex 1, §§ 131–133) <i>Check the EIA and its approval, if applicable.</i></p>	<p><i>Description:</i></p> <p>An EIA is conducted for the fertiliser complex and have been approved for operation by the local authority dated 2007-04-23.</p> <p>According to the EIA operational approval, the approval includes the nitric acid plant as mention in point 1. In point 8 any changes additional approval is required. Since the project activity is located in the nitric plant, it does not consider as a change to the plant</p> <p><i>Justification of evidences:</i></p> <p>By means of document review, the validation team has reviewed the EIA operational approval issued by the Environment Protection Department, Government of Punjab dated 2010-08-18 for the fertilizer complex where the project activity is located in the nitric acid plant.</p> <p><i>Conclusion:</i></p> <p>The EIA for the fertiliser complex which includes the nitric acid plant, therefore is in compliance to host country requirements.</p>	<p>/PDD/ /A2/</p>	OK	OK
<p>D.1.3. Has an analysis of the environmental impacts of the project activity been sufficiently described and in line with the host party environmental legislation?</p> <p>(EB 55 Annex 1, §§ 130–132) <i>Check the PDD (section D). Check whether the project will</i></p>	<p><i>Description:</i></p> <p>Please refer to D1.2 above.</p> <p><i>Justification of evidences:</i></p> <p>Refer to D1.2 above</p> <p><i>Conclusion:</i></p>	<p>/PDD/ /A2/</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>create any adverse environmental effects. Check the relevant national environmental legislation.</i>	Refer to D.1.2 above			
D.1.4. Are transboundary environmental impacts considered in the analysis? (EB 55 Annex 1, §§ 131–133) <i>Check the documents and local official sources / expertise regarding transboundary environmental impacts.</i>	<p><i>Description:</i></p> <p>There is no transboundary issue to the project activity. The nitric acid plant is located within a fertiliser complex that is not bordering with other countries.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the project site map that indicates the location of the project activity which is located inside the host country.</p> <p><i>Conclusion:</i></p> <p>The project activity is developed within the host country of Pakistan</p>	/PDD/ /onsite/	OK	OK
<p>E. Stakeholder Comments</p> <p><i>The DOE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.</i></p>				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p>E.1. Have relevant local stakeholders been invited to consultation prior to the publication of the PDD?</p> <p>(EB 55 Annex 1, § 128)</p> <p><i>Check by means of document review and interviews with local stakeholders if and when a local stakeholder consultation process has been carried out.</i></p>	<p><i>Description:</i></p> <p>Local stakeholder consultations have been conducted as stated in Section E.1 of PDD. The stakeholders were invited through public announcement and newspapers advertisement.</p> <p>It was held at Fatima Fertilizer Company Limited site on 2011-07-18, prior to the publication of the PDD on 2011-07-29.</p> <p>The stakeholders invited are local communities, local government officials and employees of the company.</p> <p><i>Justification of evidences:</i></p> <p>The validation team has reviewed the minutes of stakeholder meeting and other supporting documents such as newspaper invitation, meeting program and attendance list.</p> <p><i>Conclusion:</i></p> <p>By means of document review, the stakeholders consultation had been conducted in accordance to paragraph 130 of VVM version 1.2</p>	<p>/PDD/ /G1/ /G2/ /G3/</p>	<p>OK</p>	<p>OK</p>
<p>E.2. Can the local stakeholder consultation process be assessed as adequate?</p> <p>(EB 55 Annex 1, § 129(a)–(c))</p> <p><i>Describe what assessment steps have been undertaken to assess the adequacy of the stakeholder consultation process. Give a final opinion on the adequacy.</i></p> <p><i>Please consider the following requirements in this context:</i></p>	<p><i>Description:</i></p> <p>Local stakeholder consultations have been conducted as stated in Section E.1 of PDD on 2011-07-18. The stakeholders were invited by public notice and newspaper</p> <p>In section E.1 – E.3 of the PDD, the project owner had meeting minutes to take note of all the questions from stakeholder, summary of comments and measure taken.</p> <p><i>Justification of evidences:</i></p>	<p>/PDD/ /G1/ /G2/ /G3/</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<p><i>(a) Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited;</i></p> <p><i>(b) The summary of the comments received as provided in the PDD is complete;</i></p> <p><i>(c) The project participants have taken due account of any comments received and have described this process in the PDD.</i></p>	<p>The validation team has reviewed the minutes of the stakeholders meeting submitted to confirm the stakeholder meetings have been conducted as stated in Section E.1 of PDD.</p> <p><i>Conclusion:</i></p> <p>The validation team is convinced that the stakeholder consultation was conducted is deemed adequate under the given conditions and in accordance to paragraph 130 of VVM version 1.2</p>			

ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-2: Assessment of Baseline Identification (EB 55 Annex 1 §§83 – 86)

<input type="checkbox"/>	Baseline is not identified
<input checked="" type="checkbox"/>	Assessment of baseline see below

Baseline Alternatives identified	Inline with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	DOE Assessment	
					Appropriateness of elimination	Assessment of validation team (results and means of assessment)
The baseline of the project activity is that the N ₂ O is emitted to the atmosphere with no N ₂ O abatement measure being implemented.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The baseline is prescribed by the applied methodology is not eliminated.	/PDD/ /ACM19/	<input checked="" type="checkbox"/>	<p>According to paragraph 105 of the VVM^{VVM}, the applied methodology ACM0019 prescribes the baseline scenario and no further analysis is required in identification of alternatives.</p> <p>No alternative scenarios are to be considered in the identification of the baseline scenario according to the approved methodology ACM0019</p> <p>The validation team confirms that the procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied, and the description of baseline identification in the PDD is transparent and verifiable</p>

ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-3: Assessment of Financial Parameters (EB 55 Annex 1, §§ 111, 112, 114/ in case financial parameters stem from FSR §113,)

<input checked="" type="checkbox"/>	No financial parameters are used for additionality justification					
<input type="checkbox"/>	Assessment of all financial parameters see below					
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT	
					Correctness of value applied	Comment
Investment	NA	NA	PDD ACM0019 Methodology	/PDD/ /ACM19/	<input checked="" type="checkbox"/>	In the absence of regulations requiring the abatement of N ₂ O emissions, the operator of the nitric acid plant has no economic incentives to take any N ₂ O abatement measures because this entails capital and operating costs but no financial benefits. Therefore, the CDM project activity is considered additional

ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS

Table A-4: Assessment of Barrier Analysis (EB 55 Annex 1, §118)

<input checked="" type="checkbox"/>		No barrier parameters are used for additionality justification		
<input type="checkbox"/>		Assessment of barriers see below		
Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result

ANNEX 5: OUTCOME OF THE GSCP

Table A-5: Outcome of the Global Stakeholder Consultation Process
(§§ 40-42, VVM Version 1.2)

<input checked="" type="checkbox"/>	No comments were received during the global stakeholder consultation period					
<input type="checkbox"/>	Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the validation team are presented below:					
Comment No.:	Comment by:	Inserted on:	Subject	Comment ^{*)}	Action taken by the validation team to take due account on the comment ^{*)}	Conclusion (incl. CARs CLs or FARs)

^{*)} In case clarifications have been requested by the validation team corresponding rows shall be added

ANNEX 6: STATEMENTS OF COMPETENCE OF ALL INVOLVED PERSONNEL

TUV NORD Certification		
Statement of Competence		
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program		
Mr. Dr. Jochen Schubert		
SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor	2014-05-11
Validation, Verification		
VCS	Senior Assessor	2014-05-11
Authorization status for technical areas within sectoral scopes:		
CODE	TECHNICAL AREA	
1.2	Renewable Energies	
13.1	Waste Handling and Disposal	
056 – Rev. 1, Date: 2011-05-12		
S01-F303 rev0 / 2010-04-19		

TUV NORD Certification		
Statement of Competence		
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program		
Mr. Robert Cheong		
SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor	2012-03-03
Validation, Verification		
VCS	Lead Assessor	2012-03-03
Authorization status for technical areas within sectoral scopes:		
CODE	TECHNICAL AREA	
1.2	Renewable Energies	
128 – Rev. 0, Date: 2011-04-21		
S01-F303 rev0 / 2010-04-19		

TUV NORD Certification		
Statement of Competence		
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program		
Mr. Ulrich Walter		
SCHEME	STATUS	VALID UNTIL
CDM	Assessor	2013-05-24
Validation, Verification		
Ji	Assessor	2013-05-24
VCS	Assessor	2013-05-24
Authorization status for technical areas within sectoral scopes:		
CODE	TECHNICAL AREA	
2.1	Electricity Distribution	
2.2	Heat Distribution	
3.1	Energy Demand	
5.1	Chemical Process Industries	
11.1	Chemical Process Industries	
12.1	Chemical Process Industries	
13.1	Waste Handling and Disposal	
13.2	Animal Waste Management	
15.2	Animal Waste Management	
149 – Rev. 0, Date: 2011-04-14		
S01-F303 rev0 / 2010-04-19		



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

Mr. Emilio Martin

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor	2013-11-30
Validation, Verification		
VCS	Lead Assessor	2013-11-30

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies

157 – Rev. 0, Date: 2011-03-21

157_B01-F003_2011-03-21_rev0

B01-F003 rev0 / 2010-04-19



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

Mr. Irawan Abidin

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

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
5.1	Chemical Process Industries
8.2	Oil and Gas Industry, Coal Mine Methane
10.2	Oil and Gas Industry, Coal Mine Methane
11.1	Chemical Process Industries
12.1	Chemical Process Industries

183 – Rev. 0, Date: 2011-03-27

183_B01-F003_2011-03-27_rev0

B01-F003 rev0 / 2010-04-19



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

Mr. Ma Paa Puratchikkanal

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor	2013-09-09
Validation, Verification		
VCS	Senior Assessor	2013-09-09

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Energy generation from renewable energy sources
3.1	Energy demand
6.1	Construction
13.1	Waste handling and disposal
15.1	Agriculture

079 – Rev. 1, Date: 2011-07-05

079_B01-F003_2011-07-05_rev1

B01-F003 rev0 / 2010-04-19