



# FINAL VALIDATION REPORT

CARBON CLIMATE PROTECTION GMBH

CATALYTIC N<sub>2</sub>O DESTRUCTION PROJECT AT  
THE NEW NITRIC ACID PLANT PANNA 4 OF  
ENAEX S.A.

**Report No: 8000398029 – 11/370**

**Date: 2011-11-29**

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

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<b>Project:</b>	<b>Title:</b>	<b>Initial PDD Version:</b>		<b>Final PDD Version</b>
	Catalytic N <sub>2</sub> O Destruction Project at the new nitric acid plant PANNA 4 of Enaex S.A.	v. 1.0 2011-07-25		v.1.2 2011-09-28
<b>Client:</b>	CARBON Climate Protection GmbH		<b>Client ref:</b>	Gerald Dunkel
<b>Project Participant(s):</b>	<b>Host Party:</b>		<b>Other involved parties:</b>	
	Republic of Chile		Republic of Austria	
<b>Applied methodology/ies:</b>	<b>Title:</b>	<b>No.:</b>	<b>Scope / TA:</b>	
	N <sub>2</sub> O abatement from nitric acid production	ACM0019, v. 1.0.0	5 / 5.1	
<b>Validation team / Technical Review and Final Approval</b>	<b>Validation Team:</b>		<b>Technical review:</b>	<b>Final approval:</b>
	(TE) Ulrich Walter (TL) Emilio Martin		Dirk Speyer Alexandra Nebel	Martin Saalmann
<b>Expected Emission reductions: [t CO<sub>2</sub>e]</b>	<b>Expected emission reductions over the first crediting period:</b>		<b>Expected crediting period starting date:</b>	
	2,737,289 t CO <sub>2</sub> e		2011-12-01	
<b>Confidential content:</b>	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
<b>Summary of Validation Opinion:</b>	<input checked="" type="checkbox"/> Positive validation opinion		<input type="checkbox"/> Negative validation opinion	
	<p>Carbon Climate Protection GmbH has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the project: "Catalytic N<sub>2</sub>O destruction project at the new nitric acid plant PANNA 4 of ENAEX S.A." 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 6 Corrective Action Requests (CARs) and 5 Clarification Requests (CLs) were raised and successfully closed.. Furthermore, a FAR was raised which shall be checked at the first 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"> <li>- The project is in line with all relevant host country criteria (Chile) and all relevant UNFCCC requirements for CDM. Project activity approval has been obtained from DNA of Republic of Chile vide the Letter of Approval (HCA) dated 22/09/2011. LoA from Austrian DNA has been released after a positive draft validation report on 09/11/2011.</li> <li>- The project additionality is sufficiently justified in the PDD.</li> <li>- The monitoring plan is transparent and adequate.</li> <li>- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 2,737,289 tCO<sub>2</sub>e are most likely to be achieved within the first and only crediting period.</li> </ul> <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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## Abbreviations

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

<b>Table of Contents</b>	<b>Page</b>
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	8
2.4 Technical Project Description	8
3 METHODOLOGY AND VALIDATION SEQUENCE.....	9
3.1 Validation Steps	9
3.2 Contract review	10
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	14
3.9.1 Definition	14
3.9.2 Draft Validation	14
3.9.3 Final Validation	14
3.10 Technical review	15
3.11 Final approval	15
4 VALIDATION FINDINGS .....	16
5 VALIDATION ASSESSMENT SUMMARY .....	29
6 VALIDATION OPINION .....	29
7 REFERENCES .....	36
ANNEX 1: VALIDATION PROTOCOL.....	43
ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION .....	89
ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS.....	90
ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS .....	91
ANNEX 5: OUTCOME OF THE GSCP .....	92



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ANNEX 6: STATEMENTS OF COMPETENCE OF ALL INVOLVED PERSONNEL.....	93
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## 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<sup>VVM</sup>, 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.

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	Catalytic N <sub>2</sub> O Destruction Project at the new nitric acid plant PANNA 4 of Enaex S.A.
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	N <sub>2</sub> O Abatement from nitric acid production, ACM0019, v.1.0.0
Technical Area(s)	5.1 -
Crediting period	<input type="checkbox"/> Renewable Crediting Period (7 y) <input checked="" type="checkbox"/> Fixed Crediting Period (10 y)
Start of crediting period	01/12/2011

### 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	Republic of Chile	Enaex S.A.
Other involved party/ies	Republic of Austria	Carbon Climate Protection GmbH

## 2.3 Project Location

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

**Table 2-3:** Project Location

No.	Project Location
Host Country	Republic of Chile
Region:	Region of Antofagasta (2 <sup>nd</sup> Region)
Project location address:	Avda. Costanera Norte 300, Mejillones
Latitude:	23° 5' 50.64" S
Longitude:	70° 25' 48.55" W

## 2.4 Technical Project Description

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

**Table 2-4:** Technical data of the project activity

Parameter	Unit	Value
Ammonia Oxidation Reactor (AOR):		
Manufacturer:	-	OSCHATZ GmbH
Initial start-up	-	November 2010
Reactor diameter	m	5.06
Nominal ammonia flow	Nm <sup>3</sup> /h	14,324
Normal operating temperature at AOR	°C	850°C – 900°C
Normal operating pressure at AOR	bar	4.5
Nominal design nitric acid production	t/day HNO <sub>3</sub> (100% conc.)	925
Type primary catalyst	-	Heraeus (95/5) FTC RF
Campaign length	days	270
Historical supplier of the ammonia oxidation catalyst (primary)	-	Heraeus
N <sub>2</sub> O removal facility		
Manufacturer:	-	Heraeus
Type:	-	Secondary treatment
N <sub>2</sub> O - removal efficiency <sup>1)</sup>	%	94%

<sup>1)</sup> According to catalyst manufacturer



## 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	2011-06-28
Submission of PDD for global stakeholder commenting process	2011-07-26
On-site visit	2011-08-29 – 2011-09-01
Draft reporting finalised	2011-09-12
Final reporting finalised	2011-10-04
Technical review on final reporting finalised	2011-10-04
LoA assessment finalised after its issuance by the Austrian DNA	2011-11-29

## 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, consistent of one team leader and one additional team member, 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 <sup>1)</sup>	Qualification Status <sup>2)</sup>	Scheme competence	Technical competence <sup>4)</sup>	Host country Competence	Team Leading competence	On-site Visit
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Emilio Martin	TN CERT Germany	TL	LA	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Ulrich Walter	TN CERT Germany	TM <sup>A)</sup>	A	<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.	Dirk Speyer	TN CERT Germany	TR <sup>B)</sup>	A	<input checked="" type="checkbox"/>	5.1	<input type="checkbox"/>	<input type="checkbox"/>	-
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Alexandra Nebel	TN CERT Germany	TR <sup>B)</sup>	SA	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Martin Saalman	TN CERT Germany	FA <sup>B)</sup>	SA	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-

<sup>1)</sup> 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

Technical Experts contributed to the assessment of special aspects of the project activity, e.g. technical or host country aspects and to the preparation of this report under the leadership of the team leader.

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.

<b>Validation Protocol Table A-1: Requirement checklist</b>				
<b>Checklist Item</b>	<b>Validation Team Comment</b>	<b>Reference</b>	<b>Draft Conclusion</b>	<b>Final Conclusion</b>
<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 (version 1) 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

<b>Interviewed Persons / Entities</b>	<b>Interview topics</b>
Project proponent representatives Project consultant	- Chronological description of the project activity with documents of key steps of the implementation.

Interviewed Persons / Entities	Interview topics
	<ul style="list-style-type: none"> <li>- Current status of plant design</li> <li>- Technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project</li> <li>- Host Government Approval</li> <li>- Approval procedures and status</li> <li>- Monitoring and measurement equipment and system.</li> <li>- Crediting period</li> <li>- Project activity starting date</li> <li>- CER allocation / ownership</li> <li>- Sustainable development issues</li> <li>- Monitoring</li> <li>- Analysis of local stakeholder consultation</li> <li>- Roles &amp; responsibilities of the project participants w.r.t. project management, monitoring and reporting</li> <li>- National Legislation</li> <li>- Editorial issues of the PDD</li> <li>- Methodology Applicability criteria fulfillment</li> <li>- Training</li> <li>- Quality Management</li> </ul>

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.

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### **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 <sup>1)</sup>	No. of CAR	No. of CL	No. of FAR
General description of project activity (A) <ul style="list-style-type: none"> <li>- Project specification</li> <li>- Technical project description</li> <li>- Participation</li> <li>- Contribution to sustainable development</li> <li>- PDD editorial aspects</li> <li>- Technology to be employed</li> </ul>	3	1	-
Project Baseline, Additionality and Monitoring Plan (B) <ul style="list-style-type: none"> <li>- Application of the Methodology <ul style="list-style-type: none"> <li>- Project Boundary</li> <li>- Baseline identification</li> </ul> </li> <li>- Calculation of GHG emission reductions <ul style="list-style-type: none"> <li>Project emissions</li> <li>Baseline emissions</li> <li>Leakage</li> </ul> </li> <li>- Additionality determination</li> <li>- Monitoring Methodology <ul style="list-style-type: none"> <li>- Monitoring Plan</li> </ul> </li> <li>- Project management planning</li> </ul>	3	3	1
Duration of the Project / Crediting Period (C)	-	-	-
Environmental impacts (D)	-	1	-
Stakeholder Comments (E)	-	-	-
<b>SUM</b>	<b>6</b>	<b>5</b>	<b>1</b>

<sup>1)</sup> The letters in brackets refer to the validation protocol



**Table 4-2:** PDD versions used for assessments

Version Nr.	Assessment Round
PDD v. 1 (Published)	
PDD v. 1.1	DOE Assessment #1
PDD v. 1.2	DOE Assessment #2

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.

Finding:	A1		
<b>Classification</b>	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The Letter of Approvals from the host country and the Annex I Country Austria are not available at the time of the on-site was conducted.		
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The Letter of Approval (LoA) from the host country has been provided to the DOE. An application for the Austrian LoA will be possible after the issuance of a positive opinion by the validating DOE.		
<b>DOE Assessment #1</b> <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 HCA from the Chilean DNA has been received from the PP. The validation confirms that the HCA has been issued by an authorised organisation as DNA on the UNFCCC website, i.e. "Comisión Nacional del Medio Ambiente (CONAMA)", from the Ministry of Environment.</p> <p>The mentioned HCA confirms that Chile is a Party to the Kyoto Protocol and that its participation is voluntary. Furthermore, it confirms that the project, cited precisely as "Catalytic N<sub>2</sub>O Destruction Project at the new nitric acid plant PANNA 4 of Enaex S.A." contributes to the sustainable development in Chile.</p> <p>The LoA from the Austrian DNA can be only released after a positive validation report from the DOE is submitted. Therefore this <b>CAR remains open.</b></p>		
<b>Corrective Action #2</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	LoA from Annex I Party has been provided to the DOE on 2011/11/11		

Finding:	A1
<b>DOE Assessment #2</b> <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 LoA from Annex I Party has been provided by the PP. The validation team confirms that:</p> <ul style="list-style-type: none"> <li>a) The LoA has been issued by the Federal Ministry of Agriculture, Forestry, Environment and Water Management, acting as the Austrian DNA which has been cross-checked with the information provided on the UNFCCC Website.</li> <li>b) The Republic of Austria approves the Project Activity "Catalytic N<sub>2</sub>O destruction project at the new nitric acid plant PANNA 4 of Enaex S.A." as a CDM Project and authorizes Carbon Climate Protection GmbH to act as a project participant.</li> <li>c) The LoA states that the Republic of Austria is a Party of the Kyoto Protocol, which was ratified on 31 May 2002.</li> <li>d) The LoA refers to the precise project title as indicated in the last revision of the PDD.</li> </ul> <p>Therefore, CAR A1 has been closed out.</p>
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> To be checked during the first periodic verification</li> <li><input checked="" type="checkbox"/> Appropriate action was taken</li> <li><input type="checkbox"/> Project documentation was corrected correspondingly</li> <li><input type="checkbox"/> Additional action should be taken</li> <li><input checked="" type="checkbox"/> The project complies with the requirements</li> </ul>

Finding:	A2		
<b>Classification</b>	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p><b>Based on V. 1.0 of the PDD:</b></p> <p>The following minor issues in the PDD were observed and need to be addressed:</p> <ul style="list-style-type: none"> <li>• Clarification is to be added in the PDD on page 2 that the GWP as of 310 for N<sub>2</sub>O is valid for the current commitment period and assumed for the calculations after 2012.</li> <li>• The methodological tool applied has not been listed.</li> <li>• The information referring to the internal policy on the final use of ammonium nitrate related to military uses and the implications on the CDM has to be further clarified.</li> <li>• Revision of the project description in section A.2 is requested as some of the design operating values do not exactly match with the information given in the Operation Manual provided by the technology provider. Also related to the project description on page 9, the implementation of the project activity should be revised to reflect the necessary technical measures.</li> </ul>		

Finding:	A2
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The final PDD was adapted accordingly and contains the following information:</p> <ul style="list-style-type: none"> <li>• The GWP of 310 for N<sub>2</sub>O is valid for the current commitment period and was used for the ex-ante calculation of the emission reduction (also after 2012).</li> <li>• The “Tool to determine the mass flow of a greenhouse gas in a gaseous stream” (Version 02.0.0) was listed.</li> <li>• The information referring to the internal policy was changed accordingly.</li> <li>• The value for pressure was changed for the AOR to 4.5 bar and the pressure for the absorption tower was added (10.2 bar). The design temperatures in the different zones of the reactor were added as well. Furthermore, at the design capacity the information “100% of weight” and the exact operation starting date were added.</li> </ul>
<b>DOE Assessment #1</b> <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><b>Based on V. 1.1 of the PDD:</b></p> <ul style="list-style-type: none"> <li>• The information on the applicability of the current GWP for N<sub>2</sub>O as 310 was included.</li> <li>• The applied tool was included in section B.1.</li> <li>• The information on the internal policy on the use of the explosives for military purposes was modified.</li> <li>• The technical information about the existing nitric acid plant existing at the project site has been amended with the design values as per the technology provider (TR-ESPINDESA) description.</li> </ul> <p>Therefore the CAR has been closed out.</p>
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<p> <input type="checkbox"/> To be checked during the first periodic verification  <input type="checkbox"/> Appropriate action was taken  <input checked="" type="checkbox"/> Project documentation was corrected correspondingly  <input type="checkbox"/> Additional action should be taken  <input type="checkbox"/> The project complies with the requirements         </p>

Finding:	A3
<b>Classification</b>	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p><b>Based on V. 1.0 of the PDD:</b></p> <p>The contact person and details for the project (i.e. phone numbers) given in Annex 1 are not consistent with the information provided by the PP during the onsite visit. Clarification is requested.</p>
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>Ms. Ursula Bustamante was nominated as new project manager and therefore Annex 1 needed to be revised. The section of the final PDD shows now the correct contact person and contact details.</p>

Finding:	A3
<b>DOE Assessment #1</b> <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>	<b>Based on V. 1.1 of the PDD:</b> During the on-site visit, the validation team confirmed that Ms. Ursula Bustamante is the project manager and the Annex 1 has been amended accordingly.
<b>Conclusion</b> <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 type="checkbox"/> The project complies with the requirements

Finding:	A4
<b>Classification</b>	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<b>Based on V. 1.0 of the PDD:</b> <ul style="list-style-type: none"> <li>Since the project site is located in an industrial complex with different nitric acid plants, a map which allows the unique identification of PANNA 4 plant within the complex is required.</li> <li>The GPS-coordinates should reflect the location of the burner and the stack of the PANNA 4 plant.</li> </ul>
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The final PDD was adapted accordingly and contains the following information: <ul style="list-style-type: none"> <li>A map (google map) was added indicating the PANNA 4 plant within the complex (see green arrow).</li> <li>The GPS-coordinates were checked again and they now reflect the approx. location of the reactor of PANNA 4 plant.</li> </ul>
<b>DOE Assessment #1</b> <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>	<b>Based on V. 1.1 of the PDD:</b> <ul style="list-style-type: none"> <li>The new map allows to identify uniquely the PANNA a plant within the industrial complex</li> <li>The GPS coordinates have been checked and they approximately correspond to the position of the reactor.</li> </ul> Therefore this CAR has been closed out.
<b>Conclusion</b> <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 type="checkbox"/> The project complies with the requirements

Finding:	B1
<b>Classification</b>	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR

Finding:	B1
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<b>Based on V. 1.0 of the PDD:</b> The efficiency of the secondary catalyst as of 90% used for calculating the ERs does not match with the specification given by the manufacturer (Heraeus). Clarification is requested.
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	After contracting "Heraeus" the efficiency of the secondary catalyst was guaranteed to reach 94% for PANNA 4 plant. Therefore the ex-ante calculation needed to be revised and new values considering an efficiency of 94% are now documented in the PDD.
<b>DOE Assessment #1</b> <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>	<b>Based on V. 1.1 of the PDD:</b> The validation team confirms that the guaranteed efficiency of the catalyst as per the manufacturer recommendation <sup>/ELA/</sup> is 94%. Therefore, Project and Emissions Reductions have been recalculated. The validation team confirms the correctness of the new value given in PDD. Therefore this CAR has been closed out.
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements

Finding:	B2
<b>Classification</b>	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<b>Based on V. 1.0 of the PDD:</b> The following issues on the monitoring parameters have been identified: <ul style="list-style-type: none"> <li>• The current definition on how the operating hours will be determined does not provide for a verifiable and transparent monitoring of this parameter. Revision is requested.</li> <li>• The provisions made for the measurements of the Nitric Acid Flow need revision in order to include how this parameter will be measured at 100% concentration.</li> <li>• The monitoring of T<sub>open,n</sub> is not necessary</li> <li>• The moisture content as a monitoring parameter should be included as per the methodological tool (Tool to determine the mass flow of a greenhouse gas in a gaseous stream, version 2) applied.</li> <li>• The definition of calibration frequency and QA/QC measures for the monitoring of P and T are not according to the applied methodological Tool.</li> </ul>

Finding:	B2
<p><b>Corrective Action #1</b></p> <p><i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>The monitoring parameters were adapted accordingly:</p> <ul style="list-style-type: none"> <li>• The operation hours will be determined as follows: the operation temperature of the oxidation burner ranges from 850 – 905°C and this range corresponds to the real operation hours of the reactor. The temperature is reported by three independent measurement points measuring the temperature at the same time.</li> <li>• The nitric acid flow will be determined as follows: It is measured with a “coriolis” type mass flow meter. The coriolis can also measure the fluid density. These two parameters are sent to the DCS, where the concentration is calculated. Finally, the nitric acid at 100% is calculated by multiplying the mass flow with the concentration.</li> <li>• The parameter T<sub>open,n</sub> was deleted.</li> <li>• The parameter “moisture content” was added as requested by the methodological tool, when applying Option A.</li> <li>• The definition of calibration frequency and QA/QC measures for the monitoring parameters pressure (P<sub>t</sub>) and temperature (T<sub>t</sub>) were adapted according to the requirements of the methodological tool.</li> <li>• In addition, the description of the volumetric flow was slightly changed.</li> </ul>



Finding:	B2
<p><b>DOE Assessment #1</b></p> <p><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><b>Based on V. 1.1 of the PDD:</b></p> <ul style="list-style-type: none"> <li>• Further elaboration on the monitoring definition of this parameter is required. It has been reported that the operating hours will be determined on the basis of the “plant operation” status given by the temperature in the reactor which is measured by means of three thermocouples. Clarification is required on which signal will be used for the monitoring of this parameter (i.e, whether the temperature monitored will be the average of the three values or any signal of one of the thermocouples, etc..). Please also note that since the temperature of the reactor will be monitored in order to determine the operating hours, QA/QC provisions shall be taken for the instruments.</li> <li>• As per the expertise of the validation team, Coriolis type mass flow meters are a common practice in the chemical industry and more specifically in the nitric acid production industry. After interviews with the PP and with the manufacturer of the Coriolis meter<sup>/IM03/</sup> the validation team confirms that the use of a Coriolis meter fulfils the requirements of the methodology in this regard.</li> <li>• OK.</li> <li>• The moisture content has been listed as monitoring parameter in section B.7.1 as required by the applied methodological tool. The QA/QC measures and monitoring description according to the requirements have been correctly defined.</li> <li>• Provisions on QA/QC measures for the monitoring parameters pressure (P<sub>t</sub>) and temperature (T<sub>t</sub>), used to determine the volume flow in normalised conditions were included as per the requirements of the methodological tool applied.</li> </ul> <p>CAR B2 remains open until the first two issues are completely closed.</p>
<p><b>Corrective Action #2</b></p> <p><i>This section shall be filled by the PP. It shall address the corrective action taken in details</i></p>	<p>The operation temperature of the oxidation burner ranges from 850 – 905°C (as defined by the technology supplier) and this range corresponds to the real operation hours of the reactor. The temperature is reported automatically by three independent measurement points (TAG numbers TT45030 A – C) measuring the temperature at the same time. The value of the instrument with the TAG number TT45030 A was selected as main signal for monitoring the operation temperature; TT45030 B and TT45030 C are used as back-up signals in case TT45030 A is not fully functional.</p> <p>Periodic calibration will be performed according to manufacturer’s recommendation.</p>

Finding:	B2
<b>DOE Assessment #2</b> <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>	<b>Based on PDD version 1.2:</b> Further explanation has been included in the “Description of measurement methods and procedures” to be applied for the parameter “operating hours” in order to clarify on the signal used for the determination of the operation status of the plant. The validation team concludes that the provisions taken for this parameter now comply with all requirements and allow for a transparent monitoring thereof. Also QA/QC have been considered for the instrumentation used. Therefore CAR B2 can be closed out.
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements

Finding:	B3
<b>Classification</b>	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<b>Based on V. 1.0 of the PDD:</b> The PDD states that initial training will be provided to the staff before the project activity starts operation. However, at the moment the on-site visit has been carried out, no provisions on this matter have been made available to the validation team. Clarification is requested on this matter.
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The PDD was revised accordingly and the statement of initial training before the project activity starts operation was deleted, since so far no final schedule for the training was fixed.
<b>DOE Assessment #1</b> <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>	<b>Based on V. 1.1 of the PDD:</b> Ok, during the first verification, the verifier shall be checked that appropriate training has been carried out among the people involved in the project. Therefore this CL has been closed and FAR B7 has been opened.
<b>Conclusion</b> <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 checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements

Finding:	B4
<b>Classification</b>	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR



Finding:	B4
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<b>Based on V. 1.0 of the PDD:</b> After interviewing the PP on the aspects of the monitoring plan, the validation team found that the description given in PDD Annex 4 should be further elaborated in order to reflect the real situation. Revision is requested.
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Since the preparation of the PDD v1.0 additional information on the monitoring system was available and therefore Annex 4 and section B.7.2. needed to be revised. The sections of the PDD show now the updated monitoring information.
<b>DOE Assessment #1</b> <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>	<b>Based on V. 1.1 of the PDD:</b> Annex 4 of the revised PDD has been amended. The validation team confirms that the information given now reflects entirely the real situation as per the evidences checked and after interviewing the PPs. Therefore CL B4 has been closed out.
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements

Finding:	B5
<b>Classification</b>	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<b>Based on V. 1.0 of the PDD:</b> The following non-conformities with the “Guidelines for Completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM), version 07 were found: <ul style="list-style-type: none"> <li>• Some equations that describe the calculation of ERs are missing in section B.6.1.</li> <li>• The flow diagram of the project boundary given in section B.3 does not comply with the requirements of the “Guidelines for Completing the PDD”. Revision is requested.</li> <li>• Sources for the values assumed in the calculation of ex-ante PE are missing.</li> <li>• Justification that the CDM was seriously considered in the decision to proceed with the project activity has not been included.</li> <li>• Section B.7.2 should be revised in order to define the tasks assigned to each relevant position within the CDM project management</li> </ul>

Finding:	B5
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The final PDD was adapted accordingly and contains the following information:</p> <ul style="list-style-type: none"> <li>• A description, how the mass flow of N<sub>2</sub>O in the gaseous stream of the tail gas was determined for ex-ante calculation, and equations were included in B.6.1.</li> <li>• A diagram showing the equipment and instruments involved in the Panna 4 project was added to section B.3.</li> <li>• Sources and assumptions for the ex-ante calculation of project emissions were added to section B.6.3.</li> <li>• A statement that CDM was considered in the decision to proceed with the project was added to section B.5. The consideration of CDM can be documented by the fact that the project activity was submitted with the application for the new methodology NM340 in April 2010. Therefore, a submission of a Prior Consideration form was not required.</li> <li>• The list of persons in section B.7.2 was exchanged by a list of responsibilities and corresponding tasks.</li> </ul>
<b>DOE Assessment #1</b> <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><b>Based on V. 1.1 of the PDD:</b></p> <ul style="list-style-type: none"> <li>• Equations 11 and 12 have been included in section B.6.1, which allow the calculation of the mass flow of N<sub>2</sub>O in the tail gas. All the necessary formulas to calculate Baseline, Project Emissions and Emissions Reductions have been listed in the revised PDD.</li> <li>• The diagram now included in section B.3 depicts the instrumentation and its location.</li> <li>• OK. The validation team confirms that the assumptions are supported by provided evidences and these are deemed to be acceptable.</li> <li>• OK</li> <li>• The tasks assigned to each relevant position and project participant in order to allow a good CDM project management have been listed in the revised PDD.</li> </ul> <p>Therefore CAR B5 has been closed out.</p>
<b>Conclusion</b> <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 type="checkbox"/> The project complies with the requirements

Finding:	B6		
<b>Classification</b>	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding:	B6
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<b>Based on V. 1.0 of the PDD:</b> The definition of the project starting date does not comply with the latest CDM glossary of terms due to the fact that the given date cannot be considered as a real action because it refers to minor pre-project expenses referred to contracting of services /payment of fees. Revision of the project starting date is therefore requested.
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The starting date of the project activity was changed to 07/07/2011, when INECO was assigned with the monitoring system. This assignment can be considered as real action, since it is a commitment to serious expenses.
<b>DOE Assessment #1</b> <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>	<b>Based on V. 1.1 of the PDD:</b> The new project starting date complies with the latest CDM Glossary of Terms. It refers to the earliest real action of the project, meaning the commitment to relevant expenditures related to the implementation of the project, in this case, the purchase of monitoring instrumentation. The validation team could confirm that this expenditure constitute more than 10% of the total costs of the project and therefore considered it as a real action as per the latest CDM Glossary of CDM Terms. Corresponding evidences <sup>/PSD/</sup> have been checked by the validation team. Therefore, CAR B6 has been closed out.
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements

Finding:	B7
<b>Classification</b>	<input type="checkbox"/> CAR <input type="checkbox"/> CL <input checked="" type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<b>Based on V. 1.1 of the PDD:</b> During the first verification process, the verifier shall be checked that appropriate training has been carried out among the people involved in the project.
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	
<b>DOE Assessment #1</b> <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>	

Finding:	B7
<b>Conclusion</b> <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

Finding:	D1
<b>Classification</b>	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<b>Based on V. 1.0 of the PDD:</b> Clarification is requested whether the project activity requires of an EIA as per the national regulations shall be included in section D.1
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The final PDD now documents in section D.1 that the CDM project didn't need an EIA, since it won't cause any environmental impact. This was officially approved by authority COREMA.
<b>DOE Assessment #1</b> <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>	<b>Based on V. 1.1 of the PDD:</b> The validation team confirmed that the evidence provided <sup>/EIA/</sup> justifies that there is no need of carrying out an EIA for the realisation of the CDM project activity. Corresponding justification has been included in the revised PDD. Therefore CL D1 has been closed out.
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input 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 from Host Country has been received from the PP. It was issued by the Chilean DNA, "Comisión Nacional del Medio Ambiente (CONAMA)", Ministry of Environment on 22<sup>nd</sup> September 2011. The authenticity of the DNA has been confirmed through the UNFCCC Website. The Letter of Approval confirms the contribution of the project to sustainable development and authorises Enaex S.A. for the development of the project with the title: "Catalytic N<sub>2</sub>O Destruction Project at the new nitric acid plant PANNA 4 of Enaex S.A.", which has been consistently given as per PDD.

The LoA from Annex I Party has been provided by the PP. The validation team confirms that the LoA has been issued by the Federal Ministry of Agriculture, Forestry, Environment and Water Management, which acts as the Austrian DNA. The Republic of Austria approves the Project Activity "Catalytic N<sub>2</sub>O destruction project at the new nitric acid plant PANNA 4 of Enaex S.A." as a CDM Project and authorizes Carbon Climate Protection GmbH to act as a project participant. The LoA states that the Republic of Austria is a Party of the Kyoto Protocol, which was ratified on 31 May 2002. Finally, the validation team confirms that the LoA refers to the precise project title as indicated in the last revision of the PDD.

##### **Project Participants**

Enaex S.A. and Carbon Climate Protection GmbH are the project participants of the project. Enaex S.A., which is consistent with PDD, Host Country Approval and Annex I Party Approval.

#### **5.1.2 Contribution to Sustainable Development**

The Host Country Approval confirms that the project contributes to sustainable Development.

#### **5.1.3 PDD editorial Aspects**

The proposed project complies with the latest PDD Template, version 03, in effect as of 28 July 2006 and the latest version of the guideline for completing the PDD.

#### **5.1.4 Technology to be employed**

The project consists of the installation of a secondary N<sub>2</sub>O abatement technology (catalyst) in the reactor of an existing nitric acid plant. The technology to be implemented is a state-of-the-art catalyst which allows the destruction of N<sub>2</sub>O from the tail gas produced in the oxidation process of the ammonia with a guaranteed efficiency of 94%. All this without affecting the current production process and without having to do any relevant modification in the reactor. The description given in the PDD reflects the intention of the PP and evidences have been provided that the project will be implemented high likely as described in the PDD.

#### **5.1.5 Small Scale Projects**

The project is beyond the threshold of Small Scale Projects.

### **5.2 Project Baseline, Additionality and Monitoring Plan**

#### **5.2.1 Application of the Methodology**

The project applies ACM0019, version 1.0.0, which is a consolidated CDM methodology and applicable version thereof. The methodological tool "Tool to determine the mass flow of a greenhouse gas in a gaseous stream, version 2 has been also applied as a requirement from the applied methodology.

All applicability conditions of the methodology are met:

- a) No secondary or tertiary abatement technology was installed before the implementation of the project.
- b) No Chilean law or regulation exists that mandates the total or partial abatement of N<sub>2</sub>O at nitric acid plants.
- c) Provisions have been made that continuous real-time measurements of N<sub>2</sub>O concentration and tail gas flow are to be undertaken

The project is in line with all requirements and stipulations mentioned in all sections of the applied methodology and not expected to result in significant emissions, related both to project and leakage, other than those listed in the methodology.

### **5.2.2 Project Boundary**

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. This has been defined as per the definition given in the applied methodology. The boundaries related to GHG sources were correctly given in PDD. No other GHG sources which might be impacted by the project and not addressed by the applied meth were found.

### **5.2.3 Baseline Identification**

The baseline is specified as per the applied methodology, which is defined as the N<sub>2</sub>O that is emitted to the atmosphere with no N<sub>2</sub>O abatement measure being implemented. The methodology establishes fixed emission factors from 2005 till 2020 which have been taken into account to calculate the ex-ante Emission Reductions for the entire fixed crediting period.

### **5.2.4 Calculation of GHG Emission Reductions**

The calculation of Emission Reductions is done following the applied methodology and the methodological tool. The values not to be monitored are all correct as were taken from the methodology and the methodological tool applied, which are the annual baseline emission factors, the Global Warming Potential of N<sub>2</sub>O, the Molecular Weight of nitrous oxide and the Universal Gas constant. Other assumed values, like the efficiency of the catalyst, the operating conditions of the nitric acid plan, etc are plausible and have been sufficiently justified. All the formulae issued are as per the applied methodology and methodological tool. Therefore, the estimated emission reductions are plausible and have been calculated in a conservative manner.

### **5.2.5 Additionality Determination**

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

The project starting date is reporting as per the latest CDM Glossary of CDM Terms. Early consideration of CDM has been justified as the project had been submitted before the date defined as project starting date for the application for a new methodology NM340. Therefore, the consideration can be assessed as serious. However CAR B6 was raised and successfully closed during the validation process.

#### **Application of methodology / methodological tools**



The additionality of the project is demonstrated according to the applied methodology as there is currently no regulation that requires the abatement of N<sub>2</sub>O, therefore the operator of the plant has no incentives to take any measure because this entails capital and operating costs and no benefits.

### **Alternatives**

The applied methodology does not require identifying alternatives to the project because the additionality is demonstrated by the fact that there are currently no regulations in Chile that partially or totally require the abatement of N<sub>2</sub>O at nitric acid plants

### **Investment analysis**

The project does not apply any investment analysis as the additionality has been proved by the fact that there is currently no regulation that requires the abatement of N<sub>2</sub>O, therefore the operator of the plant has no incentives to take any measure because this entails capital and operating costs and no benefits.

### **Barrier analysis**

The project does not apply any barrier analysis as the additionality has been proved by the fact that there is currently no regulation that requires the abatement of N<sub>2</sub>O, therefore the operator of the plant has no incentives to take any measure because this entails capital and operating costs and no benefits.

### **Common practice analysis**

Common practice analysis is not applied.

## **5.2.6 Monitoring Methodology**

The Monitoring Plan defined in the PDD is in compliance with the applied methodology ACM0019, v. 1.0.0, and methodological tool "Tool to determine the mass flow of a greenhouse gas in a gaseous stream", version 02.

## **5.2.7 Monitoring Plan**

The monitoring plan covers all monitoring parameters given in the applied monitoring methodology and the methodological tool which have to be monitored w.r.t. the project boundary. The following monitoring parameters have been considered:

- a) The Nitric acid production
- b) The number of operating hours



- c) The volumetric flow of the gaseous stream
- d) The volumetric fraction of N<sub>2</sub>O on a dry basis
- e) The moisture content of the gaseous stream
- f) The temperature and Pressure of the gaseous stream

During the on-site visit and after checking the provided evidences, the validation team can confirm that the monitoring plan can be implemented and all monitoring arrangements are feasible within the project design. However CAR B2 was raised and successfully closed during the validation process.

### **5.2.8 Project Management Planning**

The project management planning is appropriate for the purpose of the project's monitoring. The following responsibilities for which the tasks have been properly assigned, have been defined as: CDM Project Management, Project Administration, Project Communication with the DOE, Project Operation, Project Maintenance, Project Construction, and Project Monitoring will be responsibilities of Enaex and prepared staff will be assigned to these positions once the project starts. However CAR B5 was raised and successfully closed during the validation process.

### **5.2.9 Crediting Period**

The project activity applies a fixed 10-year crediting period. The starting date of the crediting period is 2011-12-01. This is assessed as appropriate after having checked the project timeline.

### **5.2.10 Environmental Impacts**

The project does not require an analysis of environmental impacts, and therefore an EIA is not available. This was evidenced accordingly. However CL D1 was raised and successfully closed during the validation process.

### **5.2.11 Comments by Local Stakeholders**

The corresponding evidences were checked on-site that allow the validation team to confirm that the Local Stakeholder Consultation Process has been done in accordance with the VVM. The validation team verified that stakeholders such as Municipalities' representatives, Chilean Government representatives (Ministry of

Environment, Ministry of Mines, Ministry of Energy, among others), and Industry Associations from Mejillones and Antofagasta, local communities and staff from ENAEX from the Prillex Plant in Mejillones were invited to the LSC. These were informed about the project in detail through a presentation carried out in Antofagasta, for which invitations were sent per post and announcements on the local media were done. Furthermore, questionnaires were given to the attendees in order to give them the opportunity to express their thoughts about the project.

No negative comments were received. A summary of the above public consultation process was included in PDD.

## 6 VALIDATION OPINION

Carbon Climate Protection GmbH has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the project: "Catalytic N<sub>2</sub>O destruction project at the new nitric acid plant PANNA 4 of ENAEX S.A." 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 6 Corrective Action Requests (CARs) and 5 Clarification Requests (CLs) were raised and successfully closed,. Furthermore, a FAR was raised which shall be checked at the first 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 (Chile) and all relevant UNFCCC requirements for CDM. Project activity approval has been obtained from DNA of Republic of Chile vide the Letter of Approval (HCA) dated 22/09/2011. LoA from Austrian DNA has been released after a positive draft validation report on 09/11/2011..
- 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 2,737,289 tCO<sub>2</sub>e are most likely to be achieved within the first and only 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.

Essen, 2011-11-29



Emilio Martin  
TÜV NORD JI/CDM CP  
Validation Team Leader

Essen, 2011-11-29



Martin Saalmann  
TÜV NORD JI/CDM CP  
Final Approval

## 7 REFERENCES

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

Reference	Document
<b>/AEIA/</b>	Resolución Exenta N°0102/2006 de Impacto Ambiental “Ampliación Plantas de Ácido Nítrico y Nitrato de Amonio. Carta N° 221/2006, dated 29 May 2006
<b>/ANMO/</b>	Ammonium Nitrate Market Outlook for 2020, by British Sulfur Consultants, July 2009
<b>/APC/</b>	Annual Program for Calibration requirements of the equipments
<b>/CA/</b>	Contractual Agreement between CARBON Climate Protection GmbH
<b>/CDS/</b>	Catalyst Data Sheet
<b>/CLC/</b>	Cascade Logic Operation Control for PANNA 4
<b>/CPC/</b>	CDM Prior Consideration Evidence: New Methodology Submission NM340 done by DNV on 26 <sup>th</sup> April 2010
<b>/DRAW/</b>	Drawings of the basket (secondary catalyst) and the preliminary positioning of the instrumentation of the measuring equipment for the project done by the Engineering company Stec.
<b>/EIA/</b>	Carta 305/2011, Servicio de Evaluación Ambiental de CONAMA. Resolution on the exemption of EIA for the CDM Project activity.
<b>/ELA/</b>	Equipment Lease Agreement (where the efficiency of 94% for the secondary catalyst is assured by the manufacturer)
<b>/HCA/</b>	Host Country Approval from Chilean DNA
<b>/ISO9001/</b>	ISO9001 Certificate for the Prillex America Mejillones Plant of ENAEX S.A., valid until 29 <sup>th</sup> October 2012.
<b>/LI/</b>	Letter of Intent of the purchase of the secondary catalyst, dated 29th July 2011
<b>/LIN/</b>	List of Instrumentation used in the project activity implemented in the quality management system of ENAEX S.A.
<b>/LOA/</b>	Letter of Approval from Austrian DNA

Reference	Document
<b>/LSCP/</b>	<ol style="list-style-type: none"> <li>1. Questionnaires of the local stakeholder consultation process collected at the meeting celebrated on 14<sup>th</sup> July 2011.</li> <li>2. Invitation letter to the LSC meeting celebrated in the “Auditorio de la Mutual de Seguridad C.Ch.C. located in Antofagasta on 14<sup>th</sup> July 2011 .</li> <li>3. List of Attendees</li> <li>4. List of invitees</li> <li>5. Announcements on the local newsletter of Antofagasta (El MERCURIO DE ANTOFAGASTA), dated 10<sup>th</sup> July 2011(before the meeting) and on 15<sup>th</sup> July 2011 (after the celebration of the meeting)</li> <li>6. Pictures of the celebration</li> <li>7. Slides of the presentation</li> </ol>
<b>/MB/</b>	Mass Balance for the Nitric Acid Ammonium Nitrate Plant in design operating conditions provided by the technology provider TR-ESPINDESA
<b>/MOC/</b>	Modalities of Communication
<b>/MSPD/</b>	Monitoring System Purchase Definition, date on 19th July 2011, Rev. 7.
<b>/N2OREG/</b>	Confirmation from the Ministry of Environment that there is currently no regulation or law in Chile on N <sub>2</sub> O emissions. Carta 0089/2011, dated 2011/03/07.
<b>/P&amp;I/</b>	Pipes and Instrumentation sheet of PANNA 4
<b>/PDD/</b>	<ol style="list-style-type: none"> <li>1. Project Design Document named “Catalytic N<sub>2</sub>O Destruction Project at the new nitric acid plant PANNA 4 of Enaex S.A., V. 1.0, dated 25/07/2011.</li> <li>2. Project Design Document named “Catalytic N<sub>2</sub>O Destruction Project at the new nitric acid plant PANNA 4 of Enaex S.A., V. 1.1, dated 21/09/2011</li> <li>3. Project Design Document named “Catalytic N<sub>2</sub>O Destruction Project at the new nitric acid plant PANNA 4 of Enaex S.A., V. 1.2, dated 28/09/2011</li> </ol>
<b>/POM/</b>	Plant Operating Manual from the technology provider, TR-ESPINDESA.
<b>/PS/</b>	Payment slid for the pre-payment of fees for the Engineering Technical Study provided by Stec.
<b>/PSD/</b>	Evidence of Project starting date as the purchase agreement signing date of the monitoring system with INECO SpA, Contract Number: SGPI N°5/2011, dated on 7 <sup>th</sup> July 2011.

Reference	Document
<b>/QMI/</b>	“Protocolo de Identificación de Instrumentos”, Instrumentation IDs definition
<b>/SDID/</b>	Service Description (Acuerdo Nivel de Servicio ANS-21) for the Instrumentation Department on the maintenance and calibration of equipments used in the project activity.
<b>/SS/</b>	Screenshots of the control panel from FoxView
<b>/TD/</b>	Basic Engineering Description titled “Proyecto Bonos de Carbono PANNA 4” carried out by Stec (ST-ENX-1101-D-001), dated 16 <sup>th</sup> August 2011.
<b>/TPS/</b>	Trip Points Specifications from the technology provider TR-ESPINDESA
<b>/TRP/</b>	Test Run Protocol (Evidencia de puesta en funcionamiento de la planta el 5 de Noviembre de 2010)
<b>/XLS/</b>	Emission reduction calculation spreadsheet

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

Reference	Document
<b>/ACM19/</b>	ACM0019: “N <sub>2</sub> O abatement from nitric acid production” (Version 1.0.0)
<b>/CPM/</b>	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
<b>/EN14181/</b>	European Norm EN14181:2004
<b>/GCP/</b>	UNFCCC: Guidelines for completing CDM-PDD and CDM-NM
<b>/IPCC-GP/</b>	IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000
<b>/IPPC-RM/</b>	Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual
<b>/KP/</b>	Kyoto Protocol (1997)
<b>/MA/</b>	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
<b>/SCT/</b>	Public available literature on Secondary Catalyst Technology:

Reference	Document
	<ol style="list-style-type: none"> <li>1. <a href="http://heraeus-catalysts.com/media/webmedia_local/downloads/Heraeus_NitroTech_nologies_brochure.pdf">http://heraeus-catalysts.com/media/webmedia_local/downloads/Heraeus_NitroTech_nologies_brochure.pdf</a></li> <li>2. <a href="http://www.uhde.eu/cgi-bin/byteserver.pl/archive/upload/uhde_publications_pdf_en_5000008.00.pdf">http://www.uhde.eu/cgi-bin/byteserver.pl/archive/upload/uhde_publications_pdf_en_5000008.00.pdf</a></li> <li>3. <a href="http://www.noble.matthey.com/pdfs-uploaded/6%20N2O.pdf">http://www.noble.matthey.com/pdfs-uploaded/6%20N2O.pdf</a></li> </ol>
<b>/TOOL/</b>	Methodological tool "Tool to determine the mass flow of a greenhouse gas in a gaseous stream, version 2"
<b>/VVM/</b>	Validation and Verification Manual (Version 01.2, Annex 1, EB 55)

**Table 7-3: Websites used**

Reference	Link	Organisation
/dna_au/	<a href="http://www.lebensministerium.at">www.lebensministerium.at</a>	Federal Ministry of Agriculture, Forestry, Environment and Water Management (DNA of Austria)
/dna_ch/	<a href="http://www.mma.gob.cl/1257/w3-channel.html">http://www.mma.gob.cl/1257/w3-channel.html</a>	Ministry of Environment CONAMA (DNA of Chile)
/cd4cdm/	<a href="http://www.cd4cdm.org">www.cd4cdm.org</a>	UNEP Riso Centre
/ipcc/	<a href="http://www.ipcc-nggip.iges.or.jp">www.ipcc-nggip.iges.or.jp</a>	IPCC publications
/unfccc/	<a href="http://cdm.unfccc.int">http://cdm.unfccc.int</a>	UNFCCC

**Table 7-4: List of interviewed persons**

Reference	Mol <sup>1</sup>		Name	Organisation / Function
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Jorge Saffie	Enaex S.A./ Project Manager
/IM01/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Josefina Díaz	Enaex S.A./ Project Engineer
/IM01/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Ursula Bustamante	Enaex S.A./ Project Engineer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Raúl Silva	Enaex S.A./ Process Engineer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	German Lamas	Enaex S.A./ Operation & Quality Manager
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Claudio Milla	Enaex S.A./ Instrumentation Department Manager
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Héctor de la Puente	Enaex S.A./ Maintenance Manager
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Alex Illge	Enaex S.A./ Prillex Plant Manager





Reference	Mol <sup>1</sup>		Name	Organisation / Function
/IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Gerald Dunkel	CARBON / Director
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Sonja Haderer	CARBON / Project Manager
/IM03/	T	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Customer Representative	Endress + Hauser / Coriolis Manufacturer

<sup>1)</sup> 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.
<b>A. General Description of Project Activity</b>				
<b>A.1. Approval</b> <i>The written approval of the parties involved is a mandatory requirement</i>				
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>	<i>Description:</i> Host Country Approval and Letter of Approval of the Annex 1 Country are still not available to the validation team at the time the on-site visit was conducted. The Austrian DNA will only provide a LoA for the current project after submission of a positive opinion from the validating DOE. Host Country Approval has been applied but at the time of conducting the on-site visit it is still pending.  <i>Justification of evidences:</i> After interview with the PPs during the on-site visit..  <i>Conclusion:</i> CAR A1 was raised.	/IM01/ /IM02/	CAR A1	<b>OK</b>
A.1.2. Are the approvals issued from organisations listed as DNAs on the UNFCCC CDM	<i>Description:</i> Please see checklist A.1.1 above	N/A		



Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
website?  (EB 55 Annex 1, §§ 44, 47, 48, 49 (b), 49 (c), 53) <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>	<i>Justification of evidences:</i> N/A  <i>Conclusion:</i> Since the Letters of Approvals are not available, this assessment will be done in section 4, CAR A1.			
A.1.3. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol?  (EB 55 Annex 1, § 45(a))	<i>Description:</i> Please see checklist A.1.1 above <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> Since the Letters of Approvals are not available, this assessment will be done in section 4, CAR A1.	N/A		
A.1.4. Do the written approvals confirm that the participation is voluntary?  (EB 55 Annex 1, § 45(b))	<i>Description:</i> Please see checklist A.1.1 above <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> Since the Letters of Approvals are not available, this assessment will be done in section 4, CAR A1.	N/A		
A.1.5. Does the written approval from the host country confirm that the project contributes to the sustainable development in the country?  (EB 55 Annex 1, § 45(c))	<i>Description:</i> Please see checklist A.1.1 above <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> Since the Letters of Approvals are not available, this assessment will be done in section 4, CAR A1.	N/A		
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?	<i>Description:</i> Please see checklist A.1.1 above <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> Since the Letters of Approvals are not available, this assessment will be done in section 4, CAR A1.	N/A		



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, §§ 45(d), 50)				
A.1.7. Are the written approvals unconditional with regard to A.1.3 to A.1.6? (EB 55 Annex 1, § 46)	<i>Description:</i> Please see checklist A.1.1 above <i>Justification of evidences:</i> N/A <i>Conclusion:</i> Since the Letters of Approvals are not available, this assessment will be done in section 4, CAR A1.			
A.1.8. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PDD internally consistent to each other? (EB 55 Annex 1, § 51)	<i>Description:</i> The information regarding the project participants listed in section A3 and Annex 1 is consistent to each other. <i>Justification of evidences:</i> The GSC-PDD version has been checked. <i>Conclusion:</i> No issues related to this matter have been raised.	/PDD/	OK	OK
A.1.9. Are all project participants listed in the PDD approved at least by one Party involved? (EB 55 Annex 1, § 51) <i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol.</i> <i>Describe the means of validation employed to draw this conclusion.</i>	<i>Description:</i> Please see checklist A.1.1 above <i>Justification of evidences:</i> N/A <i>Conclusion:</i> Since the Letters of Approvals are not available, this assessment will be done in section 4, CAR A1.	N/A		
A.1.10. Are any other project participants approved but not listed in the PDD? (EB 55 Annex 1, § 52)	<i>Description:</i> No other project participants approved have been listed in the PDD. <i>Justification of evidences:</i> PPs were interviewed during the on-site visit on this matter <i>Conclusion:</i> No issues related to this matter have been raised	/IM01/ /IM02/	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>A.1.11. Does the DoE have a direct contractual relationship with the PP?</p> <p>(EB 55 Annex 1, § 51; EB 50 Annex 48, §§ 7–9)</p> <p><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></p>	<p><i>Description:</i> The DoE has a direct contractual with CARBON Climate Protection GmbH which is a PP listed in the PDD however, the LoA from the Austrian DNA is still pending. Please see checklist A.1.1 above.</p> <p><i>Justification of evidences:</i> Contractual agreement with the validating DOE.</p> <p><i>Conclusion:</i> No issues related to this matter have been raised.</p>	/CA/	OK	OK
<p><b>A.2. Contribution to Sustainable Development</b></p> <p><i>The project's contribution to sustainable development is assessed.</i></p>				
<p>A.2.1. Has the host country confirmed that the project assists it in achieving sustainable 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><i>Description:</i> Please see checklist A.1.1 above</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> Since the Letters of Approvals are not available, this assessment will be done in section 4, CAR A1</p>	N/A		
<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>Description:</i> The project will not create other environmental or social benefits than GHG emission reductions.</p> <p><i>Justification of evidences:</i> After checking description of the project in the PDD and interview with the PPs during the on-site visit.</p>	/PDD/ /IM01/	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 the other positive aspects not related to GHG emission reduction on the environment.</i>	<i>Conclusion:</i> No other environmental or social benefits than the reduction of GHG emission will be created by the project.	/IM02/		
<b>A.3. PDD editorial aspects</b>  <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)	<i>Description:</i> The latest version of the PDD form as version 3, in effect as of 28 July 2006 has been used.  <i>Justification of evidences:</i> By checking the PDD.  <i>Conclusion:</i> No issues related to this matter have been raised.	/PDD/	OK	OK
A.3.2. Has the PDD been duly filled in accordance with the latest guidance(s)? (EB 55 Annex 1, §§ 56–57)	<i>Description:</i> No, the following issues were found no to be in compliance with the latest version of the “Guidelines for Completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM), version 07”:  Some equations that describe the calculation of ERs are missing in section B.6.3.  • Revision of the project description in section A.2 is requested as some of the design operating values do not match with the Operation Manual provided by the technology provider. Also related to the project description on page 9, the implementation of the project activity should be revised to reflect the necessary technical measures.	/PDD/ /ACM19/ /GCP/	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.
	<ul style="list-style-type: none"> <li>The figure given in section B.3 does not comply with the requirements of the “Guidelines for Completing the PDD”. Revision is requested.</li> <li>Sources for the values assumed in the calculation of ex-ante PE are missing.</li> <li>Justification that the CDM was seriously considered in the decision to proceed with the project activity has not been included.</li> <li>Section B.7.2 should be revised in order to define the tasks assigned to each relevant position within the CDM project</li> </ul> <p><i>Justification of evidences:</i> PDD, applied methodology and the Guideline for Completing the PDD were checked.</p> <p><i>Conclusion:</i></p>			
<b>A.4. Technology to be employed</b>  <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>				
A.4.1. Does the PDD contain a clear, accurate and complete project description?  (EB 55 Annex 1, §§ 58–59)	<i>Description:</i> The project contains a clear and accurate and complete project description. The project consist of a secondary catalytic N <sub>2</sub> O abatement treatment to be implemented in a dual-pressure nitric acid plant. The design capacity has been defined as	/PDD/  /LIC/	CAR A2	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>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> <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>	<p>per the Operation Manual of the plant defined by the technology provider (Técnicas Reunidas – ESPINDESA).</p> <p>The commercial plant started with the plant test conducted in November 2010.</p> <p>However, some technical description in section A.2 referred to the design operating values of the existing nitric acid plant do not exactly match with the information given in the Operation Manual provided by the technology provider.</p> <p><i>Justification of evidences:</i> The description given in the PDD has been cross-checked with the plant observation during the site visit and legal documentation of the project like the operation manual of the plant.</p> <p><i>Conclusion:</i> Revision of the PDD has been requested regarding the technical information of the project as described in CAR A2.</p>	<p>/POM/ /TRP/</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> The project activity has not been implemented at the time the on-site visit has been conducted. However, the validation team confirms that the project will be most likely implemented as per the description in the PDD, which is supported by the provided evidences.</p> <p><i>Justification of evidences:</i> The validation team has checked the Purchase Agreement of the secondary catalyst, the technical description from the Engineering company and the purchase agreement of the monitoring system. Also, by means of interviewing the PPs and plant observation during on-site visit.</p> <p><i>Conclusion:</i> No issues related to this matter have been raised.</p>	<p>/PDD/ /IM01/ /IM02/ /ELA/ /LI/ /MSPD/</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>A.4.3. In case the project involves alteration of the existing installation or process, is a clear description available regarding the differences between the project and the pre-project situation?</p> <p>(EB 55 Annex 1, §§ 63–64) Describe the steps taken to validate this issue.</p>	<p><i>Description:</i> The project does not involve a relevant alteration of the existing installation. The N<sub>2</sub>O abatement catalyst will be implemented inside the ammonia reactor. Same operation conditions as per pre-project situation will be maintained. No effect on nitric acid production is foreseen since the catalyst does not affect the amount of NO<sub>2</sub> available for the production of nitric acid.</p> <p><i>Justification of evidences:</i> The description of the PDD, interviews with the PPs, the technical study from the Engineering company and technical literature on secondary N<sub>2</sub>O abatement.</p> <p><i>Conclusion:</i> the project does not involve any relevant alteration of the existing installation.</p>	<p>/PDD/ /IM01/ /IM02/ /TD/ /SCT/</p>	OK	OK
<p>A.4.4. Does the project design engineering reflect current good practices?</p> <p>Consider the equipment specifications, literature (e.g. EU BREF papers) and professional experiences. Describe the process undertaken to assess the engineering.</p>	<p><i>Description:</i> The project design engineering does reflect good practices. A complete description of the project has been included in the technical study done by the engineering company. The</p> <p><i>Justification of evidences:</i> Technical study by the project design Engineering Company (Stec), the catalyst specification and the lease agreement with the catalyst provider.</p> <p><i>Conclusion:</i> The project engineering reflects a start-of-the-art technology.</p>	<p>/ELA/ /TD/ /CDS/</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>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> The project uses a state of the art technology. According to manufacturer specifications, the installation of a secondary catalyst could reduce in more than 94% the N<sub>2</sub>O emissions, bringing down the nitric acid plant emissions to values comparable to the cleanest plant in the world in terms of N<sub>2</sub>O emissions.</p> <p><i>Justification of evidences:</i> By means of checking the project technical documentation from the Engineering company, interviews and technical literature on N<sub>2</sub>O abatement.</p> <p><i>Conclusion:</i> No further issues were found on this matter.</p>	<p>/IM01/ /IM02/ /ELA/ /LI/ /MSPD/ /unfccc/</p>	OK	OK
<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> The PDD states that initial training will be provided to the staff before the project activity starts operation. However, at the moment the on-site visit has been carried out, no evidences for this could be made available to the validation team.</p> <p><i>Justification of evidences:</i> By means of interviews with the PPs.</p> <p><i>Conclusion:</i> CL B3 has been raised.</p>	<p>/IM01/ /IM02/</p>	CL B3	OK
<p><b>A.5. Small scale project activity</b></p> <p><i>It is assessed whether the project qualifies as small-scale CDM project activity</i></p>				
<p>A.5.1. Does the project qualify as a small scale CDM project activity as defined in decision 4 / CMP.1 annex II?</p> <p>(EB 55 Annex 1, §§ 135–136 (a))</p>	<p><i>Description:</i> The project qualifies as a large scale</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		



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.5.2. Does the project apply one of the approved small scale categories and any methodology and tool referred therein?</p> <p>(EB 55 Annex 1, § 136 (b))</p> <p><i>Check, if applicable the expiry dates of the applied methodology. Further, take into consideration the general guidance to the methodologies<sup>1</sup>, which provide guidance on equipment capacity, equipment performance, sampling and other monitoring related issues.</i></p>	<p><i>Description:</i> The project qualifies as a large scale</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>A.5.3. Is the small scale project activity not a debundled component of a larger project activity?</p> <p>(EB 55 Annex 1, § 136 (c))</p> <p><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></p>	<p><i>Description:</i> The project qualifies as a large scale</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>A.5.4. Is an assessment of the environmental impacts of the proposed SSC CDM project activity required by the host Party?</p> <p>(EB 55 Annex 1, § 136 (d))</p>	<p><i>Description:</i> The project qualifies as a large scale</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		

<sup>1</sup> <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.
<b>B. Project Baseline, Additionality and Monitoring Plan</b>				
<b>B.1. Application of the Methodology</b>				
<p>B.1.1. Does the project apply an approved and applicable CDM methodology and a valid version thereof?</p> <p>(EB 55 Annex 1, § 65) Describe the steps taken to validate this issue.</p>	<p><i>Description:</i> The project applies the approved methodology ACM0019, version 1.0.0 which is a valid version.</p> <p><i>Justification of evidences:</i> UNFCCC's website.</p> <p><i>Conclusion:</i> No issues on this matter were found</p>	<p>/unfccc/ /ACM19/</p>	OK	OK
<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) Describe the steps taken to validate this issue.</p>	<p><i>Description:</i> Yes</p> <p><i>Justification of evidences:</i> PDD and UNFCCC's website</p> <p><i>Conclusion:</i> No issues on this matter were found</p>	<p>/PDD/ /unfccc/ /ACM19/</p>	OK	OK
<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) Describe for <u>each</u> applicability criterion listed in the selected approved methodology the steps taken to assess the</p>	<p><i>Description:</i> The applicability criteria is fulfilled. The validation team has validated that there was no secondary nor tertiary abatement technology installed before the implementation of the project. Moreover, no Chilean law or regulation has been found that mandates the total or partial abatement of N<sub>2</sub>O at nitric acid plants. Finally, the provisions of the project are that continuous real-time measurements of N<sub>2</sub>O concentration and tail gas flow are to be</p>	<p>/LI/ /POM/ /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.
information contained in the PDD.	undertaken.  <i>Justification of evidences:</i> The Letter of Intent for the lease of the secondary catalyst with the catalyst provider has been checked. Interviews with the PPs were conducted. The Plant Operation Manual has been checked in order to confirm that no secondary or tertiary catalyst was installed before the implementation of the project. The purchase agreement of the Monitoring System and the description of the Monitoring Plan in the PDD were checked.  <i>Conclusion:</i> The applicability criteria of the applied methodology are fulfilled.			
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?  (EB 55 Annex 1, §§ 72–75)	<i>Description:</i> All the applicability criteria have been met. Please refer to section above.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> No revision or deviation from the methodology is necessary.	N/A		
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?  (EB 55 Annex 1, § 69, 71)	<i>Description:</i> There are no other stipulations mentioned in the methodology the project should be in accordance with that have not been addressed in previous checklists.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A	N/A		

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 check whether the proposed project activity meets <u>all the other possible stipulations and /or limitations</u> mentioned in all sections of the approved methodology selected.</i>				
<b>B.2. Project Boundaries</b> <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> Yes, 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. This has been defined as per the definition given in the applied methodology.</p> <p><i>Justification of evidences:</i> The applied methodology and the PDD have been cross-checked.</p> <p><i>Conclusion:</i> No issues have been identified on this regard</p>	/ACM19/ /PDD/	OK	OK
<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> All sources and GHG required by the methodology have been included in the project boundary.</p> <p><i>Justification of evidences:</i> PDD and applying methodology were checked. And by means of on-site visit observation was confirmed that no other sources than those defined in the PDD are likely to occur.</p> <p><i>Conclusion:</i> No issues have been found on this matter.</p>	/ACM19/ /PDD/	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.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> Emissions typically defined for tertiary abatement treatments have been excluded due to the fact that this project makes use of a secondary treatment.</p> <p><i>Justification of evidences:</i> PDD and the technical description of the project provided by the engineering company Stec were checked.</p> <p><i>Conclusion:</i> No further issues have been found on this matter.</p>	/TD/ /PDD/	OK	OK
<p><b>B.3. Baseline Identification</b></p> <p><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></p>				
<p>B.3.1. What possible baseline scenarios have been considered?</p> <p>(EB 55 Annex 1, §§ 67(b), 83)</p> <p><i>Fill in all alternatives in table A-2.</i></p>	<p><i>Description:</i> N/A. Baseline is defined in the applied methodology and refers to the N<sub>2</sub>O that is emitted to the atmosphere with no abatement measure.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>B.3.2. Is the list of alternatives complete?</p> <p>(EB 55 Annex 1, §§ 67(b), 83)</p>	<p><input 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</p>	N/A		



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 was validated that all alternatives are plausible and no plausible alternative is excluded from the consideration</i>	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 N/A			
B.3.3. What has been identified as the baseline scenario? (EB 55 Annex 1, §§ 81–82, 86) <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>	<i>Description:</i> Baseline is defined in the applied methodology and refers to the N <sub>2</sub> O that is emitted to the atmosphere with no abatement measure. This is given based on a default emission factor expressed as kg N <sub>2</sub> O / t HNO <sub>3</sub> . <i>Justification of evidences:</i> PDD and applied methodology have been checked. <i>Conclusion:</i> No issue has been found on this matter.	/PDD/ /ACM19/	OK	OK
B.3.4. Has the baseline scenario been determined according to the methodology? (EB 55 Annex 1, §§ 82, 87(e)) <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>	For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2. <input checked="" type="checkbox"/> The determination has been carried out as per the procedure contained in the applied methodology. <input type="checkbox"/> The following CARs / CLs have been identified with respect to the selection of the baseline scenario:	/PDD/ /ACM19/	OK	OK
B.3.5. Has any plausible alternative scenario been excluded?	For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2.	N/A		



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, § 83) <i>Describe how it is validated that no plausible alternative scenario has been excluded.</i>	<input type="checkbox"/> No plausible baseline scenario has been excluded. <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: N/A			
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</u>, <u>calculations</u> and <u>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/	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</i>	<i>Description:</i> Baseline is defined in the applied methodology and refers to the N <sub>2</sub> O that is emitted to the atmosphere with no abatement measure. <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A	/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>the Board. Pl. consider the guidance EB 22 annex 3 (regarding E+ and E- policies).</i>				
<p>B.3.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?</p> <p>(EB 55 Annex 1, § 87(a)–(c))</p> <p><i>Describe whether the documents and sources referred to in the PDD are correctly quoted and clearly referenced.</i></p>	<p><i>Description:</i> Baseline is defined in the applied methodology and refers to the N<sub>2</sub>O that is emitted to the atmosphere with no abatement measure.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>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.</p> <p>(EB 55 Annex 1, § 86)</p>	<p><i>Description:</i> Baseline is defined in the applied methodology and refers to the N<sub>2</sub>O that is emitted to the atmosphere with no abatement measure.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		



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>B.4. Additionality Determination</b> <i>The assessment of additionality will be validated with focus on whether the project itself is not a likely baseline scenario.</i>				
<b>B.4.1. Methodology</b>				
<p>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?</p> <p>(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></p>	<p><i>Description:</i> The additionality of the project is demonstrated according to the applied methodology as there is currently no regulation that requires the abatement of N<sub>2</sub>O, therefore the operator of the plant has no incentives to take any measure because this entails capital and operating costs and no benefits.</p> <p><i>Justification of evidences:</i> The PDD and the applied methodology have been checked. Also confirmation from the Ministry of Environment that there are currently no regulations on the abatement of N<sub>2</sub>O in Chile was provided by PP.</p> <p><i>Conclusion:</i> The applied methodology established that the project is additional as soon as it can be demonstrated that there are no regulations that require the abatement of N<sub>2</sub>O in the Host Country. Therefore the justification of the additionality follows the requirements of the applied methodology.</p>	/PDD/ /N2ORE G/	OK	OK
<b>B.4.2. Consideration of CDM before project start</b>				
<p>B.4.2.1. Is the project starting date reported in accordance with the CDM glossary of terms?</p>	<p><i>Description:</i> No, the project starting date reported does not comply with the CDM glossary of terms due to the fact that the given date in the GSC-PDD version cannot be considered as a real action because it refers to minor pre-project expenses referred to</p>	/PS/ /PSD/ /PDD/	CAR B6	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>(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>contracting of services /payment of fees.</p> <p><i>Justification of evidences:</i> The payment invoices to the Engineering Company (Stec) have been checked.</p> <p><i>Conclusion:</i> The definition of the project starting date has to be revised</p>			
<p>B.4.2.2. In case the project start date is on or after 2<sup>nd</sup> 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> No, this is not necessary according to EB49, Annex 22, since the PDD has been submitted to the UNFCCC fairly before any possible project starting date for the application of a new methodology (NM340) on 26<sup>th</sup> April 2010.</p> <p><i>Justification of evidences:</i> The submission of the application for the new methodology NM340.</p> <p><i>Conclusion:</i> No further issues have been observed on this matter.</p>	/CPC/	OK	OK
<p>B.4.2.3. In case the project start date is before commencing of validation and 2<sup>nd</sup> August 2008, was the incentive from the CDM seriously considered and are details given in the PDD?</p>	<p><i>Description:</i> The project start date is after 2<sup>nd</sup> August 2008. Please see section above.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		



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, §§ 100, 102) <i>Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.</i>				
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>	<i>Description:</i> The project start date is after 2 <sup>nd</sup> August 2008. Please see section above. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		
B.4.2.5. Is the project start date consistent with the available evidences? (EB 55 Annex 1, § 102) <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>	<i>Description:</i> Please refer to section B.4.2.1 <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		
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)) <i>Describe the steps taken to validate this issue.</i>	<i>Description:</i> N/A since the project starting date is after 2 <sup>nd</sup> August 2008 and the consideration of CDM has been accordingly demonstrated with the submission of the PDD of the project for the application of a new methodology (NM340) before the project starting date. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		

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.4.2.7. How was the CDM involved in the decision making process?</p> <p>(EB 55 Annex 1, § 102)</p> <p><i>Describe why CDM was a decisive factor in the decision making process.</i></p>	<p><i>Description:</i> N/A since the project starting date is after 2<sup>nd</sup> August 2008 and the consideration of CDM has been accordingly demonstrated with the submission of the PDD of the project for the application of a new methodology before the project starting date.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<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> N/A since the project starting date is after 2<sup>nd</sup> August 2008 and the consideration of CDM has been accordingly demonstrated with the submission of the PDD of the project for the application of a new methodology (NM340) before the project starting date.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<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> N/A</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>B.4.2.10. Did implementation of the project ceased after its commencement and did implementation recommence after consideration of the CDM?</p>	<p><i>Description:</i> No, the implementation of the project has not ceased after its commencement.</p> <p><i>Justification of evidences:</i> After Interview with the PPs and the fact that the implementation has not started yet.</p>	/IM01/ /IM02/	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 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>	<i>Conclusion:</i> No issues were identified on this matter.			
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> The CDM involvement is critical, since the implementation of the project will result in investment and operation costs (e.g., refilling of catalyst), however, other than the CDM incentives, the project will not generate any incomes.  <i>Justification of evidences:</i> The current regulations in Chile on N <sub>2</sub> O abatement were checked. The lease agreement of the catalyst which accounts for almost 50% of the total investment.  <i>Conclusion:</i> It can be confirmed that the involvement of CDM is crucial for the implementation of the project.	/IM01/ /IM02/ /ELA/	OK	OK
<b>B.4.3. Identification of alternatives Step 1</b> (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 outputs or services that are to be supplied by the proposed CDM project activity?  (EB 55 Annex 1, §§ 105–107) <i>Describe the steps taken to validate this issue on the basis</i>	<i>Description:</i> The applied methodology does not require identifying alternatives to the project because the additionality is demonstrated by the fact that there are currently no regulations in Chile that partially or totally require the abatement of N <sub>2</sub> O at nitric acid plants.  <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		



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>of your local and sectoral knowledge.</i>				
<b>B.4.3.2.</b> Have all realistic alternatives been identified to the project?  (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>	<i>Description:</i> Please see section B.4.3.1 above. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		
<b>B.4.3.3.</b> Do all identified alternatives comply with enforced legislations?  (EB 55 Annex 1, §§ 106(c)) <i>Describe the steps taken to validate this issue. Refer to the legislations.</i>	<i>Description:</i> Please see section B.4.3.1 above. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		
<b>B.4.4. Investment analysis Step 2</b>  <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>				
<b>B.4.4.1.</b> Does the PDD provide evidence that the project would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs?	<i>Description:</i> The project does not apply investment analysis. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		



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, § 108)				
<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)  <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> The project does not apply investment analysis.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A</p>	N/A		
<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)  <i>Describe the steps taken to validate this issue.</i></p>	<p><i>Description:</i> The project does not apply investment analysis.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A</p>	N/A		
<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)</p>	<p><i>Description:</i> The project does not apply investment analysis.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A</p>	N/A		

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 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>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> The project does not apply investment analysis.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>B.4.4.6. Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58, § 4)</p> <p><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></p>	<p><i>Description:</i> The project does not apply investment analysis.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>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?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58, § 4)</p>	<p><i>Description:</i> The project does not apply investment analysis.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		

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.4.4.8. Are depreciation and other non-cash related items added back to net profits for the purpose to calculate the financial indicator?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58, § 5)</p>	<p><i>Description:</i> The project does not apply investment analysis.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>B.4.4.9. Is taxation excluded in the investment analysis or is the benchmark intended for post tax comparisons?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58, § 5)</p>	<p><i>Description:</i> The project does not apply investment analysis.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<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> The project does not apply investment analysis.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<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><i>Description:</i> The project does not apply investment analysis.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		



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 48, Annex 11)				
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?  (EB 55 Annex 1, § 109; EB 51 Annex 58, § 9)	<i>Description:</i> The project does not apply investment analysis. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		
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 calculation of income tax.  (EB 51 Annex 58, § 11)  <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>	<i>Description:</i> The project does not apply investment analysis. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		
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?  (EB 55 Annex 1, § 109; EB 51 Annex 58, § 10)	<i>Description:</i> The project does not apply investment analysis. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		
B.4.4.15. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or	<i>Description:</i> The project does not apply investment analysis. <i>Justification of evidences:</i> N/A	N/A		

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>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)  <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>Conclusion: N/A</i></p>			
<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 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>Description: The project does not apply investment analysis.</i></p> <p><i>Justification of evidences: N/A</i></p> <p><i>Conclusion: N/A</i></p>	N/A		
<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: The project does not apply investment analysis.</i></p> <p><i>Justification of evidences: N/A</i></p> <p><i>Conclusion: N/A</i></p>	N/A		
<p>B.4.4.18. Was the benchmark consistently used in</p>	<p><i>Description: The project does not apply investment analysis.</i></p>	N/A		

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 past for similar projects with similar risks? (EB 55 Annex 1, § 112(c))	<i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A			
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, (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>Description:</i> The project does not apply investment analysis. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		
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> The project does not apply investment analysis. <i>Justification of evidences:</i> N/A <i>Conclusion:</i> N/A	N/A		
B.4.4.21. Have parameters, constituting less than 20% of total project costs or revenues, been identified with potential material	<i>Description:</i> The project does not apply investment analysis. <i>Justification of evidences:</i> N/A	N/A		

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>impact on the financial parameter?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58, § 17)</p> <p><i>Describe whether those parameters are considered in the sensitivity analysis?</i></p>	<p><i>Conclusion: N/A</i></p>			
<p>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?</p> <p>(EB 55 Annex 1, § 109; EB 51 Annex 58, § 18)</p> <p><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></p>	<p><i>Description: The project does not apply investment analysis.</i></p> <p><i>Justification of evidences: N/A</i></p> <p><i>Conclusion: N/A</i></p>	N/A		
<p><b>B.4.5. Barrier analysis Step 3 or SSC additionality assessment</b></p>				
<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: The barrier analysis has not been applied since the additionality is demonstrated by the fact that there are currently no regulations in Chile that partially or totally require the abatement of N<sub>2</sub>O at nitric acid plants.</i></p> <p><i>Justification of evidences: N/A</i></p> <p><i>Conclusion: N/A</i></p>	N/A		



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.4.5.2. 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> Please see B.4.5.1 above. The barrier analysis has not been applied.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>B.4.5.3. Has the unavailability of means of finance for the project been described and adequately substantiated? Do evidences doubtlessly prove that the financing of the project was assured only due to the benefit of the CDM?</p> <p>(EB 55 Annex 1, §§ 116, 137, EB 50 Annex 13, § 9)</p>	<p><i>Description:</i> Please see B.4.5.1 above. The barrier analysis has not been applied.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>B.4.5.4. How is it justified and evidenced that the barriers given in the PDD are real?</p> <p>(EB 55 Annex 1, § 116(a))</p>	<p><i>Description:</i> Please see B.4.5.1 above. The barrier analysis has not been applied.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>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?</p>	<p><i>Description:</i> Please see B.4.5.1 above. The barrier analysis has not been applied.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		

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, § 116(b))				
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> Please see B.4.5.1 above. The barrier analysis has not been applied.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A	N/A		
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?  (EB 50 Annex 13, § 5)	<i>Description:</i> Please see B.4.5.1 above. The barrier analysis has not been applied.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A	N/A		
B.4.5.8. Would provision of additional financial means lead to the mitigation of the barrier(s) demonstrated?  (EB 50 Annex 13, § 7) <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>	<i>Description:</i> Please see B.4.5.1 above. The barrier analysis has not been applied.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A	N/A		



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>B.4.6. Common practice analysis Step 4</b> (in case of SSC projects skip this step)				
<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> The applied methodology does not require a common practice analysis because the additionality is demonstrated by the fact that there are currently no regulations in Chile that partially or totally require the abatement of N<sub>2</sub>O at nitric acid plants.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>B.4.6.2. To what extent similar projects have been undertaken in the relevant region?</p> <p>(EB 55 Annex 1, § 120(b))</p>	<p><i>Description:</i> Please see checklist B.4.6.2 above.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		
<p>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?</p> <p>(EB 55 Annex 1, § 120(c))</p>	<p><i>Description:</i> Please see checklist B.4.6.2 above.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A		

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>B.5. Ex-Ante Calculation of GHG Emission Reductions</b>  <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>				
<b>B.5.1. Are the equations applied correctly according to the applied approved methodology?</b>  (EB 55 Annex 1, §§ 67(c), 89–90, 92) <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>	<i>Description:</i> The equations applied for the calculation of baseline and project emissions, and emission reductions.  <i>Justification of evidences:</i> The equations used in the provided calculation spreadsheet have been cross-checked with the applied methodology.  <i>Conclusion:</i> All the equations have been correctly implemented	/ACM19/ /XLS/	OK	OK
<b>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)?</b>	<i>Description:</i> The methodology requires the use of the methodological tool "Tool to determine the mass flow of a greenhouse gas in a gaseous stream", which allows different options to determine this parameter, depending on the measurement basis, i.e. dry or wet. The project has chosen Option A, which refers to dry basis measurement of the tail gas flow	/MB/ /PDD/ /ACM19/ /POM/	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>(EB 55 Annex 1, §§ 90–91)</p> <p><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>measurement. The validation team confirms that the condition given in the tool in order to be able to consider dry basis measurements is fulfilled. This condition establishes that the moisture content of the tail gas stays below 0.05 kgH<sub>2</sub>O/m<sup>3</sup> dry gas..</p> <p><i>Justification of evidences:</i> The PDD and the mass balance referred to the design operating conditions of the nitric acid production process provided by the technology provider (TR-ESPINDESA) of the nitric acid ammonium nitrate plant was checked. In the mass balance, the expected moisture content given by the technology supplier at design operation conditions is far below 0.05 kgH<sub>2</sub>O/m<sup>3</sup> dry gas. Although the mass balance is given for design operating conditions not considering the presence of the secondary catalyst, this value is deemed to be acceptable since the secondary catalyst only affects the composition of the gas in terms of N<sub>2</sub>O.</p> <p>However, the methodological tool requires the measurement of the moisture once a year in order to check the fulfilment of this condition.</p> <p><i>Conclusion:</i> Proper justification has been provided that option A is deemed to be correct</p>			
<p>B.5.3. Have conservative assumptions been used when calculating the project emissions?</p> <p>(EB 55 Annex 1, §§ 90–91)</p> <p><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</i></p>	<p><i>Description:</i> In general conservative assumptions, mainly based on considering project design values given by the technology provider have been taken into account. Indeed, too conservative assumptions have been assumed since the abatement efficiency for the second catalyst used is below the guaranteed efficiency given by the manufacturer.</p> <p><i>Justification of evidences:</i> The catalyst data sheet and the lease</p>	<p>/ELA/ /CDS/ /PDD/</p>	<p>CL B1</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>interpreted in the PDD.</i>	agreement with the manufacturer were checked.  <i>Conclusion:</i> Conservative assumptions have been used when calculating project emissions, however CL B1 has been raised.			
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> The project activity will not lead to any other GHG emission within the project boundary which might be expected to contribute more than 1% of the overall ERs. The main activity within the project activity is the catalyst abatement of N <sub>2</sub> O, for which no fossil fuel or electricity is used.  <i>Justification of evidences:</i> The validation team has checked the engineering design of the project. Also by means of interviews with the PPs and the validation team expertise.  <i>Conclusion:</i> No issues were found on this matter.	/IM01/ /IM02/ /TS/	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 investment analysis. Note, in order to be conservative in both cases the PLF may be different.</i>	<i>Description:</i> The number of operating hours used to calculate ex-ante the amount of produced nitric acid has been determined based on the experience of ENAEX in operating these plants.  <i>Justification of evidences:</i> The validation team has checked historical production rates of the current acid nitric plant. The general shut down in order to change the primary gauzes and do maintenance is normally done on a yearly basis. The shut down period is according to the common practice observed in other plants. If no operation issues appear, the plant is operated at 100% of its capacity, which has been observed during the on-site visit. The demand of ammonium nitrate increases year by year in Chile and therefore it is not envisaged that the lack of demand will oblige the plant operator to reduce the production.  <i>Conclusion:</i> The plant load factor is deemed to be conservatively	/IM01/ /SS/ /ANMO/	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.
	assumed.			
<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> All data sources and assumptions which remain fixed throughout the crediting period have been correctly applied and in a conservative way.</p> <p><i>Justification of evidences:</i> The GSC version of the PDD and the applied methodology and tool have been checked.</p> <p><i>Conclusion:</i> The validation team confirms that assumptions and fixed values are deemed to be reasonable and provide for a conservative estimation of the ER.</p>	/PDD/	OK	
<p>B.5.6. Are all ex-ante calculation values for 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><input checked="" type="checkbox"/> All "Values of data to be applied for the purpose of calculating expected emissions reductions" are considered to be reasonable, applicable and conservative.</p> <p><input type="checkbox"/> The following mistakes have been identified in this context: N<sub>2</sub>O concentration and volume flow are based on expected operating values given by the technology provider TR-ESPINDESA, and the efficiency of the second catalyst according to specifications by the manufacturer. Nitric acid production is based on the daily design production at 100% load and the operating days based on an annual shut down. Evidences have been cross-checked and almost all values are deemed to be reasonable, except for the efficiency of the secondary catalyst, that does not match with the specification given by the manufacturer (Heraeus) .CL B1 has been</p>	/PDD/ /TS/ /MB/	CL B1	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.
	raised.			
<p><b>B.5.7.</b> 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> The monitoring system which is going to be implemented provides for a real and verifiable emission reductions. The project will allow for long-term benefits related to the mitigation of climate change with the abatement of N<sub>2</sub>O for the project lifetime.</p> <p><i>Justification of evidences:</i> The description of the monitoring system specifications in the lease agreement has been checked by the validation team, as well as interview with the PPs.</p> <p><i>Conclusion:</i> No issues were found on this matter.</p>	<p>/PDD/ /ELA/ /IM01/ /IM02/</p>	OK	OK
<p><b>B.6. Monitoring of Emission Reductions</b></p> <p><i>It is assessed whether the monitoring plan is appropriate for the project activity and in line with the applied methodology.</i></p>				
<p><b>B.6.1.</b> 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)</p> <p><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</i></p>	<p><i>Description:</i> No, the water content (moisture) of the tail gas has not been listed as a monitoring parameter. As per the applied “Tool to determine the mass flow of a greenhouse gas in a gaseous stream”, if Option A (which is the case in the current project) is applied, the moisture content should be monitored.</p> <p><i>Justification of evidences:</i> The applied methodology and the description of the monitoring plan in the PDD were checked.</p> <p><i>Conclusion:</i> CAR B2 has been raised.</p>	<p>/PDD/ /ACM19/ /TOOL/</p>	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.
<i>methodology assess whether the selection of parameters is justified and correct.</i>				
<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)</p> <p><i>Assess whether the provided information for all parameters w.r.t.</i></p> <ul style="list-style-type: none"> <li>a) <i>Label (name of the data / parameter)</i></li> <li>b) <i>data unit</i></li> <li>c) <i>description</i></li> <li>d) <i>source of data</i></li> <li>e) <i>measurement equipment / method / procedure</i></li> <li>f) <i>monitoring frequency</i></li> <li>g) <i>QA/QC procedures</i></li> </ul> <p><i>are appropriately described and in compliance with the requirements of the methodology..</i></p>	<p><i>Description:</i> No, the validation team have found the following issues:</p> <ul style="list-style-type: none"> <li>The provisions made for the measurements of the Nitric Acid Flow need revision in order to include how this parameter will be measured at 100% concentration.</li> <li>The moisture content as a monitoring parameter should be included as per the methodological tool (Tool to determine the mass flow of a greenhouse gas in a gaseous stream, version 2) applied</li> <li>The current definition on how the operating hours will be determined does not provide for a verifiable and transparent monitoring of this parameter.</li> <li>The definition of calibration frequency and QA/QC measures for the monitoring of P and T are not according to the applied methodological Tool.</li> </ul> <p><i>Justification of evidences:</i> Check of the Monitoring Plan in the PDD and interview with the PPs</p> <p><i>Conclusion:</i> CAR B2 has been raised on this regard</p>	<p>/PDD/ /ACM19/ /TOOL/ /IM01/ /IM02/</p>	CAR B2	OK
<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</p>	<p><i>Description:</i> In general, all the means of implementing the monitoring plan are clearly described and in line with the methodology. However, some equations that describe the calculation of ERs are missing in section B.6.3.</p>	<p>/PDD/ /ACM19/</p>	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.
<p>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>Justification of evidences:</i> Applied methodology and PDD were checked.</p> <p><i>Conclusion:</i> The issue has been raised in CAR B5.</p>			
<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 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><i>Description:</i> The assessment on this can only be done after closing the non conformities raised in CAR B2.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A	CAR B2	OK
<p>B.6.5. Are the QA/QC procedures appropriate sufficient to ensure the emission reductions achieved from the project activity 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</i></p>	<p><i>Description:</i> In general, the QA/QC procedures defined for the monitoring of parameters that allow the ex-post calculation of ERs are appropriately defined. However, some issues were encountered with regard to the monitoring plan. A complete assessment can only be done once CAR B2 is closed. Please check the assessment on this matter in section 4.</p> <p><i>Justification of evidences:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>	N/A	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.
<i>maintenance of equipment. Address further any review procedures.</i>				
<p><b>B.6.6. Are procedures identified for data management?</b></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> The plant operator ENAEX S.A. has implemented a quality management system for all the activities carried out in the Prillex Plant in Mejillones. Moreover, the plant operator is implementing the project activity in the existing Quality Management System. At the time the validation team conducted the on site visit, a well defined operational structure was defined. Procedures to identify, implement, operate and maintain the monitoring equipments for the project activity are already in place. Service Description for the instrumentation department to define maintenance and calibration needs of the instrumentation of the project is in place. Data from the DCS will be archived and backed up in separate servers.</p> <p><i>Justification of evidences:</i> Procedures and work instructions to identify instruments and interview with the responsible for the CDM project in the plant.</p> <p><i>Conclusion:</i> Responsibilities and procedures for data management are defined or provisions are in place to establish them before the project starting date. Provisions are made to ensure that data will be archived for the whole crediting period + 2 years.</p>	<p>/QMI/ /SDID/ /IM01/</p>	OK	OK
<p><b>C. Duration of the Project/ Crediting Period</b></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> No, the project starting date reported does not comply with the CDM glossary of terms due to the fact that the given date in the GSC-PDD version cannot be considered as a real action because it refers to minor pre-project expenses referred to contracting of services /payment of fees.</p> <p><i>Justification of evidences:</i> The payment invoices to the Engineering Company (Stec) have been checked.</p> <p><i>Conclusion:</i> The definition of the project starting date has to be revised</p>	<p>/PS/ /PSD/ /PDD/</p>	CAR B6	OK
<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> The project's operational lifetime is defined as the lifetime of the nitric acid plant. Although the catalyst has a lifetime of about 3 or 4 years, it is the intention of the plant operator to refill the catalyst in order to keep operating the project.</p> <p><i>Justification of evidences:</i> The lease agreement with the catalyst manufacturer, interviews with the plant operator and the validation team expertise.</p> <p><i>Conclusion:</i> No issues were found on this matter. On the other side, no investment analysis is applied.</p>	<p>/ELA/ /IM01/</p>	OK	OK
<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 period is realistic, taking into consideration the times needed for validation and registration.</i></p>	<p><i>Description:</i> The project start of the crediting period is clearly defined and deemed as realistic. The on-site observation confirmed that the project will be in operation soon.</p> <p><i>Justification of evidences:</i> Purchase agreement of the monitoring system, lease agreement of the catalyst and interviews with the PPs.</p> <p><i>Conclusion:</i> No issues were found on this matter.</p>	<p>/IM01/ /IM02/ /ELA/ /MSPD/</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>D. Environmental Impacts</b>  <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>				
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>	<i>Description:</i> There is no requirement from the Chilean authorities to conduct an EIA for the current CDM project activity. According to the “Ley 19.300 sobre Bases Generales del Medio Ambiente” (environmental law), the project activity is not recognised as to require an EIA. However, there is a positive resolution from “Comisión Regional de Ambiente” authorising ENAEX for increasing the production of Ammonium Nitrate up to 860,000 MT/yr, which is to be reached thanks to PANNA 4 production plant, where the current project is carried out.  <i>Justification of evidences:</i> The resolution from “Servicio de Evaluación Ambiental” belonging to CONAMA confirms that there is no need of EIA for the CDM activity.  <i>Conclusion:</i> No further issues on this matter were found.	/EIA/ /AEIA/	OK	OK
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? (EB 55 Annex 1, §§ 131–133) <i>Check the EIA and its approval, if applicable.</i>	<i>Description:</i> See section D.1.1.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A	N/A		

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>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 create any adverse environmental effects.</i>  <i>Check the relevant national environmental legislation.</i></p>	<p><i>Description:</i> See section D.1.1.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A</p>	N/A		
<p>D.1.4. Are transboundary environmental impacts considered in the analysis?</p> <p>(EB 55 Annex 1, §§ 131–133)  <i>Check the documents and local official sources / expertise regarding transboundary environmental impacts.</i></p>	<p><i>Description:</i> See section D.1.1.  <i>Justification of evidences:</i> N/A  <i>Conclusion:</i> N/A</p>	N/A		
<p><b>E. Stakeholder Comments</b></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> Relevant local stakeholders like public institutions: Municipalities' representatives, Chilean Government representatives (Ministry of Environment, Ministry of Mines, Ministry of Energy, among others), University, Hospital and, Industry Associations from Mejillones and Antofagasta, local communities and staff from ENAEX from the Prillex Plant in Mejillones were invited to the LSC. The consultation meeting took place in Antofagasta, which is the next big city to Mejillones, about one-hour drive from Mejillones, on 14<sup>th</sup> July 2011, prior to the publication of the PDD. Buses for those people from Mejillones willing to attend the meeting in Antofagasta were put for free by Enaex.</p> <p><i>Justification of evidences:</i> Invitation letter to the LSC meeting, list of attendees and the list of invitees, as well as announcements on the local newsletter of Antofagasta (EL MERCURIO) were checked.</p> <p><i>Conclusion:</i> The local stakeholder consultation process took place prior to the validation process and the relevant people were invited to participate in it. Therefore, no issues were found on this matter.</p>	/LSCP/ /IM01/	OK	OK
<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>(a) Comments by local stakeholders that can reasonably be</i></p>	<p><i>Description:</i> A presentation of the CDM project was carried out during the consultation meeting. The attendees had the opportunity to raise questions to the project and a questionnaire was hand out to the attendees for them to have the opportunity to give their opinion about the project. No relevant comments to be taken into account by the PP for the implementation of the project activity were observed.</p> <p><i>Justification of evidences:</i> Questionnaires filled in by the attendees collected at the meeting, list of attendees, pictures taken during the celebration of the meeting and slides of the presentation given by</p>	/LSCP-7/	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>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 project responsible persons were checked by the validation team.</p> <p><i>Conclusion:</i> The local stakeholder consultation process can be assessed as adequate.</p>			



## ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION

**Table A-2:** Assessment of Baseline Identification (EB 51 Annex 3, §§ 82 – 85)

<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	Evi-dence 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 <sub>2</sub> O is emitted to the atmosphere with no N <sub>2</sub> 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"/>	According to paragraph 105 of the VVM <sup>VVM</sup> , the applied methodology ACM0019 prescribes the baseline scenario and no further analysis is required in identification of alternatives.



## ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

**Table A-3:** Assessment of Financial Parameters (EB 51 Annex 3, §§110, 111, 113/ in case financial parameters stem from FSR §112,)

<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

## ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS

**Table A-4:** Assessment of Barrier Analysis (EB 51 Annex 3, § 117)

<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 <sup>*)</sup>	Action taken by the validation team to take due account on the comment <sup>*)</sup>	Conclusion (incl. CARs CLs or FARs)

<sup>\*)</sup> In case clarifications have been requested by the validation team corresponding rows shall be added



ANNEX 6: STATEMENTS OF COMPETENCE OF ALL INVOLVED PERSONNEL

Statement of Competence

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

Mr. Dirk Speyer

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

Authorization status for technical areas within sectoral scopes:

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

244 – Rev. 0, Date: 2011-03-28

244\_201-F003\_2011-03-28\_rev0

501-F003 rev0 / 2010-04-19

Statement of Competence

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

Mr. Martin Saalmann

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor	2013-03-31
Ji	Senior Assessor	2013-03-31
VCS	Senior Assessor	2013-03-31

022 – Rev. 0, Date: 2011-03-17

022\_201-F003\_2011-03-17\_rev0

501-F003 rev0 / 2010-04-19

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	Assessor	2013-05-24
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

149\_201-F003\_2011-04-14\_rev0

501-F003 rev0 / 2010-04-19

Page 93 of 94



**Statement of Competence**  
Assessment 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	Lead Assessor	2013-11-30
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\_2014-F003\_2011-03-21\_rev0

2014-F003 rev0 / 2010-04-19

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

**Ms. Alexandra Nebel**

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2014-08-24
Ji	Senior Assessor Technical Reviewer	2014-08-24
VCS	Senior Assessor Technical Reviewer	2014-08-24

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
14.1	Forestry

095 – Rev. 3, Date: 2011-08-25

095\_2014-F003\_2011-08-25\_rev3

2014-F003 rev0 / 2010-04-19