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Validation Report

Mitsubishi Corporation

VALIDATION OF THE CDM-PROJECT:

CATALYTIC N_2O ABATEMENT PROJECT IN THE TAIL GAS OF THE NITRIC ACID PLANT OF THE HANWHA CORPORATION (HWC) IN ULSAN, REPUBLIC OF KOREA

REPORT NO. 910471

2007, February 08

TÜV SÜD Industrie Service GmbH

Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

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Subject: Validation of a CDM Project

Accredited TÜV SÜD Unit:	**TÜV SÜD Contract Partner:**
TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich Federal Republic of Germany	TÜV SÜD Japan Ltd. Sumitomo Fudosan 3 Bldg. 7F 4-15-3, Nishi-Shimjuku, Shinjuku-ku Tokyo, 160-0023 -Japan
Client:	**Project Site(s):**
Mitsubishi Corporation 16-3,Konan 2-chome Minato-ku, Tokyo, 108-8228, JAPAN	Hanwha Corporation (HWC) Nitric Acid Plant 753-22 Onsan eup Uljugun Ulsan City – Republic of Korea

Project Title: Catalytic N2O Abatement Project in the Tail Gas of the Nitric Acid Plant of the Hanwha Corporation (HWC) in Ulsan, Republic of Korea

Applied Methodology / Version: AM0028 version 3 **Scope(s):** 5

First PDD Version:		**Final PDD version:**	
Date of issuance:	2006-10-02	Date of issuance:	2006-11-17
Version No.:	0.4	Version No.:	08
Starting Date of GSP	2006-10-07		

Estimated Annual Emission Reduction: 281,272 tons CO_{2e}

Assessment Team Leader:	**Further Assessment Team Members:**
Werner Betzenbichler	Nikolaus Kröger Shuji Iida Yutaka Yoshida Stefan Reis

Summary of the Validation Opinion:

☒ The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board in case letters of approval of all Parties involved will be available before the expiring date of the applied methodology(ies) or the applied methodology version respectively.

☐ The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the project for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board on this decision.

Abbreviations

ACM	Approved Consolidated Methodology
AM	Approved Methodology
AOR	Ammonia Oxidation Reactor
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
GHG	Greenhouse gas(es)
HWC	Hanwha Corporation
KP	Kyoto Protocol
MP	Monitoring Plan
NGO	Non Governmental Organisation
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party (Designated Operational Entity = DOE) of a proposed project activity against all defined criteria set for the registration under the Clean Development Mechanism (CDM). Validation is part of the CDM project cycle and will finally result in a conclusion by the executing DOE whether a project activity is valid and should be submitted for registration to the CDM-EB. The ultimate decision on the registration of a proposed project activity rests at the CDM Executive Board and the Parties involved.

The project activity discussed by this validation report has been submitted under the project title:

Catalytic N2O Abatement Project in the Tail Gas of the Nitric Acid Plant of the Hanwha Corporation (HWC) in Ulsan, Republic of Korea.

1.2 Scope

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

- The Kyoto Protocol, in particular § 12
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)
- Decisions by the EB published under http://cdm.unfccc.int
- Specific guidance by the EB published under http://cdm.unfccc.int
- Guidelines for Completing the Project Design Document (CDM-PDD), and the Proposed New Baseline and Monitoring Methodlogy (CDM-NM)
- The applied approved methodology
- The technical environment of the project (technical scope)
- Internal and national standards on monitoring and QA/QC
- Technical guideline and information on best practice

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

Once TÜV SÜD receives a first PDD version, it is made publicly available on the internet at TÜV SÜD's webpage as well as on the UNFCCC CDM-webpages for starting a 30 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised (under certain conditions the GSP will be repeated) and the final PDD will form the basis for the final evaluation as presented by this report. Information on the first and on the final PDD version is presented at page 1.

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

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual (for further information see www.vvmanual.info), an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a validation protocol was customised for the project. TÜV SÜD developed a "cook-book" for methodology-specific checklists and protocol based on the templates presented by the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The validation protocol serves the following purposes:

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

The validation protocol consists of three tables. The different columns in these tables are described in the figure below.

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

Validation Protocol Table 1: Conformity of Project Activity and PDD				
Checklist Topic / Question	***Reference***	***Comments***	***PDD in GSP***	***Final PDD***
The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further subdivided. The lowest level constitutes a checklist question / criterion.	*Gives reference to documents where the answer to the checklist question or item is found in case the comment refers to documents other than the PDD.*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any **Request** has to be substantiated within this column*	*Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (☑), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification Request (CR)** is used when the validation team has identified a need for further clarification.*	*Conclusions are presented in the same manner based on the assessment of the final PDD version.*

As for this specific project the final PDD was applying a different version of the methodology than the first one, a table 1a and a table 1b are presented reflecting the changes by the revision of the methodology.

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Clarifications and corrective action requests	***Ref. to table 1***	***Summary of project owner response***	***Validation team conclusion***
If the conclusions from table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	*Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.*	*The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.*	*This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".*

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

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

2.1 Appointment of the Assessment Team

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

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

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

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Werner Betzenbichler	**ATL**	☑	☑	
Nikolaus Kröger	T	☑	☑	
Shuji Iida	GHG-A	☑		
Yutaka Yoshida	T			
Stefan Reis	E			☑

Werner Betzenbichler is head of the department Carbon Management Service of TÜV SÜD and head of the "Certification Body for Climate and Energy" and expert for conventional energy generation, renewable energy, energy expansion planning and familiar with the recent version of CDM and JI criteria as necessary for the implementation of Art. 6 and Art. 12 of the KP. Since 2000 he works in the international climate change and emission trading business as a verifier.

Nikolaus Kröger is mechanical engineer and expert for emissions monitoring and quality assurance at the department "Environmental Service" of TÜV SÜD. He is located in the Hamburg office and is also engaged as personally accredited verifier in the EU-ETS serving the Northern German market. Being a trainee for qualifying as ghg-auditor he has already been involved in several CDM activities with a special focus on industrial non-CO_2 projects.

Shuji Iida is chemical process engineer and working as ghg auditor and ISO14000/ISO9000 auditor for TÜV SÜD in Japan. He is recently involved in the several CDM projects. He received extensive training on all aspects of the flexible mechanism. For this specific project he was responsible for in-

put to the technical aspects within the chemical industry and the contact to technical expert aside of Japanese project developer.

Yutaka Yoshida is mechanical engineer and responsible for the carbon market of TÜV SÜD in Japan. He is trainee as ghg auditor and is recently involved in the first CDM and JI projects. He received extensive training on all aspects of the flexible mechanism. For this specific project he was responsible for the communication with the Japanese project developer and the Japanese project participant.

Stefan Reis is mechanical engineer and heading the Industry Services Unit of TÜV SÜD Korea Ltd. staying in Korea since more than twelve years. He is located in the Seoul office. He supported the assessment team with his knowledge of the local market and by ensuring the translation of original documents written in Korean language.

2.2 Review of Documents

The first PDD version submitted by the client and additional background documents related to the project design and baseline were reviewed as initial step of the validation process. A complete list of all documents and proofs reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews

In the period of October 26 to 27, 2006 TÜV SÜD performed interviews on-site with project stakeholders to confirm selected information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in the context of this on-site visit.

Name	Organisation
Kazuki Miura	Mitsubishi Corporation
Makato Saito	Mitsubishi Corporation
Byeong-Cheol Song	Hanwha Corporation
Chae-Sung Lee	Hanwha Corporation
Cheonchae Jeong	Hanwha Corporation
Akira Takashima	Mitsubishi Corporation
Toshio Miura	N.E. Chemcat Corporation
Takehiko Ito	Sumiko Eco-Engineering
Woon-Seob Lee	Hanwha Corporation
Joon Hyung Park	Hanwha Corporation
Kyung Pyo Lee	Hanwha Corporation
Tomonori Hattori	Mitsubishi Corporation (Korea) Ltd.
Wan-Tae Kim	KS Engineering Co., Ltd.

2.4 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD`s positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are summarised in chapter 3 below and documented in more detail in the validation protocol in annex 1.

2.5 Internal Quality Control

As final step of a validation the validation report and the protocol have to undergo and internal quality control procedure by the Certification Body “climate and energy”, i.e. each report has to be approved either by the head of the certification body or his deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

It rests at the decision of TÜV SÜD’s Certification Body whether a project will be submitted for requesting registration by the EB or not.

3 SUMMARY OF FINDINGS

As informed above all finding are summarized in table 2 of the attached validation protocol. In total the assessment team expressed 11 Clarification Requests and 43 Corrective Action Requests.

Although the amount of requests is comparatively high, this fact is more related to the aspect that this is the first time of applying this methodology with the new PDD format.

The key findings in both PDD versions were related to the provision of information on the intended monitoring approach, the correct allocation of those parameters either to be fixed ex-ante or to be monitored throughout the project's lifetime.

Furthermore the surveillance of the introduction of new regulatory thresholds was not ensured by the first two PDD versions as this aspect of the methodology was not reflected within the documents.

There has been a specific concern on the treatment of emissions by additional fuel consumption as consequence on the technical requirement of heating the tail gas. The concern was resolved automatically when switching to the more recent version of AM0028.

Version 3 of AM0028 offers a very conservative approach for the determination of greenhouse gas emissions by additional fuel consumption in case no monitoring of the combustion efficiency is foreseen. Although the PPs do not intend to monitor this parameter the conservative approach was not correctly applied. This has been resolved by the final PDD version.

Within the original documents and spreadsheets there have been some inconsistencies on figures and calculations delivering the result on the emission reduction estimation. These inconsistencies have been resolved in the final versions of the submitted documents. The given estimation is reproducible and substantiated by verified data and assumptions.

The operating range for nitric acid production parameter was fixed by determining the 95%-quantile of historic production data. As the methodology requests applying a 97.5%-quantile this would have led to disadvantages for the project participants. The final PDD correctly follows the procedure given by the approved methodology.

Baseline determination and additionality are correctly discussed by the PDD. There is no concern on this discussion as the continuation of the current situation is obviously the most likely scenario as long as there are no legal constraints.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on UNFCCC website by installing a link to TÜV SÜD's own website and invited comments by Parties, stakeholders and non-governmental organisations during a period of 30 days.

The following table presents all key information on this process:

webpage: http://www.netinform.de/KE/Wegweiser/Guide2.aspx?ID=2149&Ebene1_ID=26&Ebene2_ID=644&mode=1	
Starting date of the global stakeholder consultation process: 2006-10-07	
Comment submitted by: -	**Issues raised:** -
Response by TÜV SÜD: -	

Due to the fact that the revised PDD is applying a more recent revision of the approved methodology this global stakeholder consultation process has been repeated. Information is presented below.

webpage: http://www.netinform.de/KE/Wegweiser/Guide2.aspx?ID=2296&Ebene1_ID=26&Ebene2_ID=678&mode=0	
Starting date of the global stakeholder consultation process: 2006-11-10	
Comment submitted by: -	**Issues raised:** -
Response by TÜV SÜD: -	

5 VALIDATION OPINION

TÜV SÜD has performed a validation of the following proposed CDM project activity:

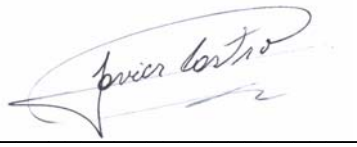
Catalytic N2O Abatement Project in the Tail Gas of the Nitric Acid Plant of the Hanwha Corporation (HWC) in Ulsan, Republic of Korea.

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board.

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

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

Munich, 2007-02-08



Certification Body “climate and energy”
TÜV SÜD Industrie Service GmbH

Munich, 2007-02-08

Assessment Team Leader

Industrie Service

Annex 1: Validation Protocol

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Table 1a Conformity of Project Activity and PDD (First Global Stakeholder Consultation Process)

(Please recognize that no final PDD has been submitted in this context due to the repetition of the GSP when applying a new revision of the methodology)

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
A. General description of project activity					
A.1. Title of the project activity					
A.1.1.	Does the used project title clearly enable to identify the unique CDM activity?		The project title clearly enables the identification of the CDM activity. No second CDM activity exists with a similar title or at the same site.	☑	
A.1.2.	Are there an indication of a revision number and the date of the revision?		The revision number and the date of the issuance of this revision is correctly indicated	☑	
A.1.3.	Is this in consistency with the time line of the project's history?		The given dates are in consistency with the time line of the project development.	☑	
A.2. Description of the project activity					
A.2.1.	Is the description delivering a transparent overview of the project activities?	4	The description of the project activity delivers a transparent overview of the project activities. The increase in production only based on maximizing the amount of operation hours only. It is indicated that the design capacity is already applied. Data is not available from similar plants regarding the confirmation of the reduction efficiency. However, there are no technical risks because the technology itself – although not yet widely commercialized – refers to well experienced components.	☑	
A.2.2.	What proofs are available evidencing that information provided in the description is in compliance with actual situation or planning?	1	During on-site inspection, production data from 2002 to 2006 were confirmed. The plant restarted commercial operation after its transfer from Incheon to Onsan in early 2005.	**CR 1**	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Clarification Request 1 A project planning schedule should be submitted to the validation team.		
A.2.3. Is the information provided by these proofs consistent with the information provided by the PDD?		The information provided by above proof is consistent with PDD.	☑	
A.2.4. Is all information provided in consistency with details provided by further chapters of the PDD?		All information is consistent with details provided in later chapters.	☑	
A.3. Project participants				
A.3.1. Is the form required for the indication of project participants correctly applied?		Corrective Action Request 1 Hanwha and Mitsubishi Korea should be placed in the same line using Korea as Party indirectly involved.	**CAR 1**	
A.3.2. Is the participation of all listed entities or Parties confirmed by each of them?		Contact responsible persons of all parties involved are indicated in Annex 1 of PDD.	☑	
A.3.3. Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?		The information on the project proponents is consistent throughout the documents.	☑	
A.4. Technical description of the project activity				
A.4.1. Location of the project activity				
A.4.1.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?		The information provided on the project activity clearly enables the identification of this project's location. The address of the plant is given as well as corresponding maps and an image by Google™Earth.	☑	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A.4.1.2. How is it ensured, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?		For this project neither any construction approval or license nor an EIA is required. 3 companies, HWC, Mitsubishi and Mitsubishi Korea participate in this project. Operation, maintenance and monitoring will be done by HWC while financing is given by Mitsubishi Korea..	☑	
A.4.2. Category(ies) of project activity				
A.4.2.1. To which category(ies) is the project activity belonging to? Is it correctly identified and indicated?		The project belongs to category 5 (chemical industries), which is correctly indicated.	☑	
A.4.3. Technology to be employed by the project activity				
A.4.3.1. Does the project design engineering reflect current good practices?	8	By introducing this technology, HWC obtains a clean technology which is not yet widely commercialized even in industrialized countries. The project technology is new a development that combines in a modular way several technologies that are already applied as for example a design used for dioxin abatement and catalyst material used for reduction of nitrous oxide. This application should consume less natural gas for tail gas heating than other comparable technologies.	☑	
A.4.3.2. Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance?		The description of the technology allows a rough overview on the abatement technology including information on the additional fuel, electricity and ammonia demand which will cause additional project emissions.	☑	
A.4.3.3. Is there any technology transfer from annex-I-countries to the host country(ies) required by the implementation of the project activity?	8	The project technology is transferred from Japan to Korea.	☑	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A.4.3.4. Is the technology implemented by the project activity environmentally safe?		The project does not cause any residues but only CO2 is formed. The catalyst is made by precious metals with high costs of raw material. Therefore the used catalyst will be recycled at the end of its lifetime.	☑	
A.4.3.5. Is all information provided in compliance with actual situation or planning as available by the project participants?		All information is in compliance with actual situation and project planning.	☑	
A.4.3.6. 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?		In the Republic of Korea the use of DeN_2O-technology is neither common nor regulated. Such technology is only applied in the context of CDM activities.	☑	
A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?		A replacement of the technology to be installed during the project period is not reasonably.	☑	
A.4.3.8. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?		The required monitoring procedures are deemed to be manageable for experienced staff in the chemical industry. At the initial stage, brief training for HWC operators is implemented by N_2O Analyzer supplier ABB.	☑	
A.4.3.9. Does the project make provisions for meeting training and maintenance needs?		See above.	☑	
A.4.3.10. Is a schedule available on the implementation of the project and are there any risks for delays?		See above.	☑	
A.4.4. Estimated amount of emission reductions over the chosen crediting period				
A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?		The PDD uses the correct form in chapter A.4.4 but instead of providing estimated emission reductions in tonnes of CO2e it expresses the result in kt.	**CAR2**	

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			Corrective Action Request 2 The estimations should be provided in tonnes of $CO2_e$ as required by the most recent version 06.1 of the "Guidelines for Completing the Project Design Document (PDD), and the Proposed New Baseline and Monitoring Methodologies (CDM-NM)".		
A.4.4.2.	Are the figures provided consistent with other data presented by the PDD?		The figures provided are consistent throughout the whole document.	☑	
A.4.5.	*Public funding of the project acitivity*				
A.4.5.1.	Is all information on public funding provided in compliance with actual situation or planning as available by the project participants?	5	Public funding is not applied to the project. According to Mitsubishi's internal business plan dated September 7, 2006, all cost related to this CDM project including facility are borne by Mitsubishi and Mitsubishi Korea.	☑	
A.4.5.2.	Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 2)?	5	In annex 2, there is no detailed description. However, as mentioned above, no application of public funding was confirmed during on-site inspection.	☑	
B. Application of a baseline and monitoring methodology					
B.1. Title and reference of the approved baseline and monitoring methodology					
B.1.1.	Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?		Reference number, version number, and title of the baseline and monitoring methodology are clearly indicated.	☑	
B.1.2.	Is the applied version the most recent one or still applicable?		The PDD applies AM0028, vers. 1, which expired on October 6, 2006. AM0028, ver.2 is valid from October 6, 2006 and draft of ver.3 is currently opened by the methodology panel. As the project requires a Letter of Approval by the DNA of the Republic of Korea which will be base due to own regulations on the	**CR2**	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		issue of a final validation report and which will require some time to be processed, there is a risk that the version applied will not be applicable at the time when requesting registration. Clarification Request 2 Please clarify whether - under realistic conditions - it will be possible to request registration before the expiring date of the applied version.		
B.2. Justification of the choice of the methodology and why it is applicable to the project activity				
B.2.1. Is the applied methodology considered being the most appropriate one?		AM0028 is solely addressing the destruction of nitrous oxide by tertiary measures. Hence it is considered that AM0028 is the appropriate choice for this project activity also applying a tertiary technology in the tail gas stream of a nitric acid plant.	☑	
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with "No"				
B.2.2. Criterion 1: The applicability is limited to the existing production capacity measured in tonnes of nitric acid. Existing production capacity is defined as the designed capacity, measured in tons of nitric acid per year, installed no later than 31 December 2005.	1	Applicability checklist / Yes / No Criterion discussed by the PDD? / Yes Compliance provable? / Yes Evidences provided by the PDD? / No Compliance verified? / Yes This nitric acid plant was transferred from Incheon to Onsan and operation was started in January 2005. During on-site inspection production reports have been assessed proving this statement.	☑	
B.2.3. Criterion 2: The project activity will not result in shut down of an existing N_2O destruction or		Applicability checklist / Yes / No Criterion discussed by the PDD? / Yes	☑	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
abatement facility at the nitric acid plant.		Compliance provable? Yes Evidences provided by the PDD? No Compliance verified? Yes During on-site inspection, it was verified that no other N2O destruction unit exists in the plant.		
B.2.4. Criterion 3: The project activity shall not affect the nitric acid production level.		Applicability checklist / Yes / No Criterion discussed by the PDD? Yes Compliance provable? Yes Evidences provided by the PDD? No Compliance verified? Yes During on-site inspection, the agreement between the project participants Mitsubishi and HWC is under discussion. This agreement mentions that HWC may operate and maintain at full capacity 100,000tons nitric acid per year during the project time. As this is already at the maximum design capacity no impact on the production will be technically possible by the project activity.	☑	
B.2.5. Criterion 4: The project activity will not cause an increase in NO_x emissions.		Applicability checklist / Yes / No Criterion discussed by the PDD? Yes Compliance provable? Yes Evidences provided by the PDD? Yes Compliance verified? Yes The project facility does not form NO_x. Nonetheless it will be necessary to relocate the existing monitoring point for NO_x to be finally after the N_2O destruction unit.	☑	

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>B.2.6. Criterion 5:
In case a $DeNO_x$ unit is already installed prior to the start of the project activity, the installed $DeNO_x$ is a Selective Catalytic Reduction (SCR) $DeNO_x$ unit</td><td></td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed by the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided by the PDD?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>
During on-site inspection, it was verified that the installed $DeNO_x$ unit is a Selective Catalytic Reduction (SCR) type</td><td>☑</td><td></td></tr>
<tr><td>B.2.7. Criterion 6:
The N_2O concentration in the flow at the inlet and the outlet of the catalytic N_2O destruction facility is measurable.</td><td></td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed by the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>
<u>Corrective Action Request 3</u>
Both N_2O concentrations at the inlet and the outlet will measured by analyzers. However, the measuring point of inlet is not proper as it has to be located at the entrance of the tail gas stream to the project boundaries.</td><td>**CAR3**</td><td></td></tr>
<tr><td colspan="5">**B.3. Description of the sources and gases included in the project boundary**</td></tr>
<tr><td colspan="5">Fill in the required amount of sub checklists for sources and gases as given by the methodology applied and comment at least every line answered with “No”</td></tr>
</table>

<table>
<tr><th colspan="2">CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.3.1.</td><td>Source:
Emissions of N_2O as a result of side reaction to the nitric acid production process
Gas(es): N_2O
Type: Baseline Emissions</td><td>8</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table></td><td>☑</td><td></td></tr>
<tr><td>B.3.2.</td><td>Source:
Emissions related to the production of ammonia used for NO_x reduction
Gas(es): CO_2, CH_4, N_2O
Type: Baseline Emissions</td><td>8</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table>
During on-site inspection, the existence of the SCR DeNOx unit was verified.</td><td>☑</td><td></td></tr>
<tr><td>B.3.3.</td><td>Source:
N_2O emissions from SCR DeNOx-unit
Gas(es): N_2O
Type: Baseline Emissions</td><td>8</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table></td><td>☑</td><td></td></tr>
<tr><td>B.3.4.</td><td>Source:
Emissions of N_2O as a result of side reaction to the nitric acid production process
Gas(es): N_2O
Type: Project Emissions</td><td>8</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr></table></td><td>☑</td><td></td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Consistency with monitoring plan? — Yes		
B.3.5. Source: Emissions related to the production of ammonia input used for NO_x reduction Gas(es): CO_2, CH_4, N_2O Type: Project Emissions	8	Boundary checklist / Yes / No: Source and gas(es) discussed by the PDD? Yes; Inclusion / exclusion justified? Yes; Explanation / Justification sufficient? Yes; Consistency with monitoring plan? Yes No consideration in the calculations is required.	☑	
B.3.6. Source: Emissions at the project site resulting from hydrocarbons used as reducing agent Gas(es): CO_2, CH_4 Type: Project Emissions	8	Boundary checklist / Yes / No: Source and gas(es) discussed in the PDD? Yes; Inclusion / exclusion justified? Yes; Explanation / Justification sufficient? Yes; Consistency with monitoring plan? Yes In addition the project uses natural gas for tail gas heating which is considered under the leakage discussion of the applied methodology version. The PDD correctly applies this approach and indicates the relevance of these emissions in the boundary discussion. Nonetheless it has to be noticed with regard to Clarification Request No. 1 that in the following revisions the use of fuel for tail gas heating is included within the boundaries. Clarification Request 3 In case of updating the PDD towards a newer version of AM0028 (see CR1) it will be necessary including the use of fuel for tail gas	**CR3**	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		heating to the project emissions an changing the monitoring approach accordingly.		
B.3.7. Source: Emissions from electricity demand Gas(es): CO_2, CH_4, N_2O Type: Project Emissions	8	<table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>No</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table> The project proponents decided to include these project emissions in the emission calculation although not required by the methodology. This incompliance with AM0028 is resulting in more conservativeness and more efforts on monitoring. Therefore no corrective action request has been issued at this stage.	☑	
B.3.8. Source: Emissions related to the production of the hydrocarbons Gas(es): CO_2, CH_4, N_2O Type: Project Emissions	8	<table><tr><th>Boundary Checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table>	☑	
B.3.9. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the PDD?	8	During on-site inspection, the future project area was explained and verified.	☑	

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario					
B.4.1.	Have all technically feasible baseline scenario alternatives (at least all scenarios listed under step 1a in AM0028, vers.1) to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete?		All options as provided by step 1a of the baseline tool of this methodology have been considered within this section. There are no further scenarios that might present attractive options to those ones presented.	☑	
B.4.2.	Have all technically feasible alternatives (at least all scenarios listed under step 1a in AM0028, vers.1) to handle NO_x emissions been identified and discussed by the PDD?		All options as provided by step 1a and 1b of the baseline tool of this methodology have been considered within this section. It has been discussed in a convincing manner that two of the options presented by the methodology are not applicable for this project.	☑	
B.4.3.	Does the project identify correctly and excludes those options not in line with regulatory or legal requirements?		All remaining options comply with regulatory requirements; hence none of them has been eliminated from further discussion.	☑	
B.4.4.	Have applicable regulatory or legal requirements been identified?		The information on national environmental legislation is correct.	☑	
B.4.5.	Is a complete list of barriers developed that prevent alternatives to occur (step 3a)?		A suitable list of barriers is presented. It is claiming for technological barriers and barriers due to prevailing practice.	☑	
B.4.6.	Is transparent and documented evidence provided on the existence and significance of these barriers?		They are transparently documented in the PDD.	☑	
B.4.7.	Is it transparently shown that at least one of the alternatives is not prevented by the identified barriers (step 3b)?		It is discussed that the continuation of the current practice would not be prevented by any barrier.	☑	
B.4.8.	Does the PDD include an appropriate discussion if and how any alternatives gen-	5	Although it is not presented explicitly it can be concluded from the previous steps that no alternative is remaining that would gener-	☑	

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	erate financial or economic benefits? (step 4)		ate financial or economic benefits.		
B.4.9.	In case of Option I: Is the least costly alternative clearly identified?		The continuation of the recent situation is obviously neither generating additional cost nor benefits.	☑	
B.4.10.	In case of Option II: Is the most suitable financial indicator clearly identified?		Not applicable	☑	
B.4.11.	In case of Option II: Is the calculation of financial figures for this indicator correctly done for all remaining alternatives?		Not applicable	☑	
B.4.12.	In case of Option II: Is the investment analysis presented in a transparent manner providing public available proofs for data?		Not applicable	☑	
B.4.13.	In case of Option II: Is the sensitivity analysis evidencing the robustness of the financial attractiveness of the selected baseline scenario?		Not applicable	☑	
B.4.14.	In case of Option II: Have reasonable variations been applied in critical assumptions?		Not applicable	☑	
B.4.15.	In case of a re-assessment in the course of the project's lifetime: Are there any new or modified NO_x-emission regulations, which may address the project baseline?		Not applicable	☑	
B.4.16.	In case of a re-assessment in the course of the project's lifetime: Have new baseline scenarios been properly discussed reflecting the altered situation?		Not applicable	☑	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
B.4.17. In case of a re-assessment in the course of the project's lifetime: Are there any new or modified N_2O-emission regulations, which may address the project baseline?		Not applicable	☑	
B.4.18. In case of a re-assessment in the course of the project's lifetime: Have new baseline scenarios been properly discussed reflecting the altered situation?		Not applicable	☑	
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality):				
B.5.1. In case of applying step 2 of the additionality tool: Is the analysis method appropriately identified (step 2a)?		As in chapter B.4 the investment analysis has been selected as the appropriate choice of possible methods.	☑	
B.5.2. In case of Option I (simple cost analysis): Is demonstrated that the activity produces no economic benefits other than CDM income?		It is clearly shown that there is no economical benefit by the reduction of the nitrous oxide concentration of the tail gas flow other than the CDM revenues.	☑	
B.5.3. In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified?		Not applicable	☑	
B.5.4. In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified?		Not applicable	☑	
B.5.5. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?		Not applicable	☑	

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.5.6.	In case of Option II or Option III: Is the analysis presented in a transparent manner providing public available proofs for data?		Not applicable	☑	
B.5.7.	In case of applying step 3 (barrier analysis): Is a complete list of barriers developed that prevent alternatives to occur?	5	The PDD refers to Section B.2, while it correctly indicates that there is no such necessity due to the application of step 2 of the additionality tool. Corrective Action Request 4 The reference should be made to section B.4 as this topic changed by the new PDD format.	**CAR4**	
B.5.8.	In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?		Not applicable	☑	
B.5.9.	In case of applying step 3 (barrier analysis): Is it transparently shown that at least one of the alternatives is not prevented by the identified barriers?		Not applicable	☑	
B.5.10.	Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD (step 4a)?		The PDD lists correctly the amount of amount of nitric acid plants in the Republic of Korea (3), which would have also potential for installing emission reduction technology.	☑	
B.5.11.	If similar activities are occurring: Is it demonstrated that in spite these similarities the project activity would not be implemented without the CDM (step 4b)?		It is correctly presented that the only reported similar activity in another plant is recently in preparation also using the CDM	☑	
B.5.12.	Is it appropriately explained how the approval of the project activity will alleviate		As there is no other incentive than the CDM this criterion is fulfilled.	☑	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
the economic and financial hurdles or other identified barriers (step 5)?				
B.6. Emissions reductions				
B.6.1. Explanation of methodological choices				
B.6.1.1. Is it explained how the procedures provided by the methodology are applied by the proposed project activity?	6	The discussion under section B.6.1 is referencing all formulae and emissions in compliance with the applied methodology and the project boundaries as presented earlier in the PDD. But no reference is made in this section concerning the treatment of data in case production parameters are leaving the permitted operating conditions, and how these conditions are established. Corrective Action Request 5 The procedures for the determination of the permitted operating range and the procedures of calculating emission reductions in case of leaving this range have to be described by the PDD.	**CAR5**	
B.6.1.2. Are formulae required for the determination of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?		The discussion under section B.6.1 is in principle referencing all formulae and emissions in compliance with the applied methodology and the project boundaries as presented earlier in the PDD. Project emissions from the operation of the production facility are not relevant due to the setting of the project boundaries. In accordance with AM0028, vers. 1 the use of fuel for tail gas heating is attributed to leakage emissions. This might be altered in case of updating the PDD to vers. 2 or draft of vers. 3. Clarification Request 4 It should be clearly indicated that the key factors: volume flow rate and N_2O concentration of tail gas, address the emissions after the outlet of the destruction equipment as required by the methodol-	See CR2 **CR4**	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		ogy.		
B.6.1.3. Are formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	6	The discussion under section B.6.1 is referencing all formulae and emissions in compliance with the applied methodology and the project boundaries as presented earlier in the PDD. Clarification Request 5 The volume flow rate at the inlet of the destruction equipment is required as relevant parameter. This is not clearly expressed by the presentation of the PDD. In case of intending to use the same monitored parameter as for project emissions (outlet) this fact should be furthermore discussed in the monitoring section, providing evidence that there is no flow loss or increase in between.	**CR5**	
B.6.1.4. Are formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	6	The PDD considers emissions by the heating of tail gas as leakage. Whereas the original methodology considers heating to be done by heat recovery systems this technology requires additional fuel (natural gas) to be used. In order to get a proper determination of the leakage emissions the PDD applies formulae as presented by AM0028, vers. 1, in the context of project emissions by additional fuel use. This application is done correctly but is not foreseen by the applied version of methodology. Clarification Request 6 It should be considered either to request for an approval of this deviation or to consider emissions by the use of fossil fuel as project emissions by applying AM0028, vers. 2.	See CR2 **CR6**	
B.6.1.5. Are formulae required for the determination of emission reductions correctly presented?	6	The formulae for determine emission reduction are correctly presented.	☑	

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td colspan="5">B.6.2. Data and parameters that are available at validation</td></tr>
<tr><td>B.6.2.1. Is the list of parameters presented by chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology?</td><td></td><td>AM0028 / Version 1 does not specify explicitly parameters to be fixed ex-ante (besides historic operation range) but the discussion under this section includes all parameter to be determined ex-ante.</td><td>☑</td><td></td></tr>
<tr><td colspan="5">Fill in the required amount of sub checklists for monitoring parameter and comment any line answered with “No”</td></tr>
<tr><td>B.6.2.2. Parameter Title: GWP_{N2O}</td><td></td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>n/a</td></tr></table>
AM0028 / Version 1 does not specify explicitly parameters to be fixed ex-ante (besides historic operation range) but the inclusion under this section is done appropriately.</td><td>☑</td><td></td></tr>
<tr><td>B.6.2.3. Parameter Title: GWP_{CH4}</td><td></td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr></table></td><td>☑</td><td></td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>n/a</td></tr>
</table>

AM0028 / Version 1 does not specify explicitly parameters to be fixed ex-ante (besides historic operation range) but the inclusion under this section is done appropriately.
</td><td></td><td></td></tr>
<tr><td>B.6.2.4. Parameter Title:
Regulation on N_2O emissions in South Korea</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>n/a</td></tr>
<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>n/a</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
</table>

AM0028 / Version 1 does not specify explicitly parameters to be fixed ex-ante (besides historic operation range) but the inclusion under this section is done appropriately.
</td><td>☑</td><td></td></tr>
<tr><td>B.6.2.5. Parameter Title:
Reg_{NOx}
Regulation on NO_x emissions in South Korea</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
</table>
</td><td>☑</td><td></td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Has this value been verified? Yes Choice of data correctly justified? Yes Measurement method correctly described? n/a During on-site inspection, a threshold due of Korean regulation at 200 ppm was confirmed.		
B.6.2.6. Parameter Title: $P_{HNO3,hist}$		Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? Yes Correct value provided? No Has this value been verified? Yes Choice of data correctly justified? No Measurement method correctly described? n/a Corrective Action Request 6 The provide value has another dimension (t/d) as requested by the methodology (t/yr). A conversion should be made using a potential design capacity applying maximal daily production and a reasonable figure for production days. Corrective Action Request 7 The methodology how the design capacity has been determined is not provided by the PDD. This is required for ensuring the comparability.	**CAR6** **CAR7**	

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.6.2.7. Parameter Title:
$T_{g,hist}$</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>No</td></tr>
<tr><td>Has this value been verified?</td><td>No</td></tr>
<tr><td>Choice of data correctly justified?</td><td>n/a</td></tr>
<tr><td>Measurement method correctly described?</td><td>No</td></tr>
</table>
<u>Corrective Action Request 8</u>

The provide value has a fixed value and not a range as requested. It is necessary to indicate a range for setting the permitted operating temperature. In addition, excel file of all historical data is to be submitted to auditor team for confirmation.

<u>Corrective Action Request 9</u>

The methodology how the operating temperature is determined is not provided by the PDD. This is required for ensuring the comparability.
</td><td>CAR8

CAR9</td><td></td></tr>
<tr><td>B.6.2.8. Parameter Title:
$P_{g,hist}$</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>No</td></tr>
<tr><td>Has this value been verified?</td><td>No</td></tr>
</table>
</td><td>CAR10

CAR11</td><td></td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Choice of data correctly justified? n/a Measurement method correctly described? No <u>Corrective Action Request 10</u> The provide value has a fixed value and not a range as requested. It is necessary to indicate a range for setting the permitted operating pressure. In addition, excel file of all historical data is to be submitted to auditor team for confirmation. <u>Corrective Action Request 11</u> The methodology how the operating pressure is determined is not provided by the PDD. This is required for ensuring the comparability.		
B.6.2.9. Parameter Title: $G_{sup,hist}$		Data Checklist — Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? Yes Measurement method correctly described? n/a The supply of catalysts by the manufacturer, Johnson Matthey, was confirmed by the submitted invoices.	☑	

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.6.2.10. Parameter Title:
$G_{com,hist}$</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>n/a</td></tr>
</table>
Composition of catalyst, Pt 95% and Rh 5% was confirmed by invoices.
</td><td>☑</td><td></td></tr>
<tr><td>B.6.2.11. Parameter Title:
$A_{OR,hist}$</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>No</td></tr>
</table>
During on-site inspection, the maximal historic ammonia flow 87.78 ton/day (almost 90 ton/day) was confirmed by production data.
<u>Corrective Action Request 12</u>
The methodology how the maximal historic ammonia flow is determined is not provided by the PDD. This is required for ensuring
</td><td>**CAR12**</td><td></td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>the comparability.</td><td></td><td></td></tr>
<tr><td>B.6.2.12. Parameter Title:
η_{TGH}</td><td></td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>n/a</td></tr></table>
<u>Corrective Action Request 13</u>

η_{TGH} 100% is not a conservative value according to the formula (2). This parameter should be monitored and therefore should be in monitoring section B7.</td><td>CAR13</td><td></td></tr>
<tr><td>B.6.2.13. Parameter Title:
$OXID_{HC}$</td><td></td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>n/a</td></tr></table>
AM0028 / Version 1 does not specify explicitly parameters to be fixed ex-ante (besides historic operation range) but the inclusion</td><td>☑</td><td></td></tr>
</table>

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<tr><td></td><td></td><td>under this section is done appropriately. Although the methodology requires an ex-post determination the applied factor is deemed to be conservative and hence acceptable.</td><td></td><td rowspan="3"></td></tr>
<tr><td>B.6.2.14. Parameter Title:
$OXID_{CH4}$</td><td></td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>n/a</td></tr></table>
AM0028 / Version 1 does not specify explicitly parameters to be fixed ex-ante (besides historic operation range) but the inclusion under this section is done appropriately. Although the methodology requires an ex-post determination the applied factor is deemed to be conservative and hence acceptable.</td><td>☑</td></tr>
<tr><td>B.6.2.15. Parameter Title:
$Type_{HC}$</td><td></td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr></table></td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Measurement method correctly described? n/a AM0028 / Version 1 does not specify explicitly parameters to be fixed ex-ante (besides historic operation range) but the inclusion under this section is done appropriately.		
B.6.2.16. Parameter Title: ρ_{HC}		Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? No Measurement method correctly described? No Corrective Action Request 14 This parameter is required to be determined annually ex-post. Hence it is required to include the density of hydrocarbons in section B.7 instead of B.6.	**CAR14**	
B.6.2.17. Parameter Title: ρ_{HNC}		Data Checklist / Yes / No Title in line with methodology? No Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? No	**CAR15** **CAR16**	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Measurement method correctly described? — No Corrective Action Request 15 This parameter is required to be determined annually ex-post. Hence it is required to include the density of methane in section B.7 instead of B.6. Corrective Action Request 16 The methodology does not separate between HC and methane. The applied approach should follow the approved methodology.		
B.6.2.18. Parameter Title: EF_{HC}		Data Checklist — Yes / No Title in line with methodology? — Yes Data unit correctly expressed? — Yes Appropriate description? — Yes Source clearly referenced? — No Correct value provided? — Yes Has this value been verified? — Yes Choice of data correctly justified? — Yes Measurement method correctly described? — Yes Corrective Action Request 17 The reference source of data, IPCC 1996 Guideline, is not deemed to be appropriate. As specific data is available, this figure should be delivered from hydrogen gas supplier.	**CAR17**	
B.6.2.19. Parameter Title: EF_{TGH}		Data Checklist — Yes / No Title in line with methodology? — Yes Data unit correctly expressed? — Yes	☑	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Appropriate description? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes This parameter can be confirmed thru internet.		
B.6.3. Ex-ante calculation of emission reductions				
B.6.3.1. Is the projection based on the same procedures as used for later monitoring?	6	The projection is done by the same algorithms as used for later monitoring.	☑	
B.6.3.2. Are the GHG calculations documented in a complete and transparent manner?	6	The prognosis is relying on conservative estimations and provided in a transparent and complete manner.	☑	
B.6.3.3. Is the data provided under this section in consistency with data as presented by other chapters of the PDD?	6	The data provided under this section is in consistency with data in other chapters of the PDD.	☑	
B.6.4. Summary of the ex-ante estimation of emission reductions				
B.6.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	6	The project activity will result in emission reductions	☑	
B.6.4.2. Is the form/table required for the indication of projected emission reductions correctly applied?	6	The form is correctly applied	☑	
B.6.4.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	6	See CR1	See CR1	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
B.6.4.4. Is the data provided under this section in consistency with data as presented by other chapters of the PDD?	6	Clarification Request 7 A new excel file should be submitted confirming the calculation of emissions.	CR7	
B.7. Application of the monitoring methodology and description of the monitoring plan				
B.7.1. Data and parameters monitored				
B.7.1.1. Is the list of parameters presented by chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology?		No, see above Corrective Action Request 18 The monitoring plan does not include tail gas flow at inlet that is required by the methodology. Corrective Action Request 19 The monitoring plan includes a parameter named “others for ex-ante determination”. Such information might be provided by annex 3.	CAR18 CAR19	
Fill in the required amount of sub checklists for monitoring parameter and comment any line answered with “No”				
B.7.1.2. Parameter Title: $F_{TG,i}$		<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr></table>	CAR20 CAR21	

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<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
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<tr><td>QA/QC procedures appropriate?</td><td>No</td></tr>
</table>
<u>Corrective Action Request 20</u>
Accuracy should be mentioned and measuring point should be indicated in PDD.
<u>Corrective Action Request 21</u>
The methodology requires the application of EN14181 or equivalent to calibration. This should be followed.
</td><td></td><td></td></tr>
<tr><td>B.7.1.3. Parameter Title:
$CO_{N2O,i}$</td><td></td><td>
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<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>No</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>No</td></tr>
<tr><td>Indication of accuracy provided?</td><td>No</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>No</td></tr>
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<u>Corrective Action Request 22</u>
Accuracy should be mentioned and measuring point should be indicated in PDD.
</td><td>CAR22</td><td></td></tr>
<tr><td>B.7.1.4. Parameter Title:
M_i</td><td></td><td>
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</td><td>CAR23</td><td></td></tr>
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<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>n/a</td></tr>
<tr><td>Measurement method correctly described?</td><td>n/a</td></tr>
<tr><td>Correct reference to standards?</td><td>n/a</td></tr>
<tr><td>Indication of accuracy provided?</td><td>n/a</td></tr>
<tr><td>QA/QC procedures described?</td><td>n/a</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>n/a</td></tr>
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<u>Corrective Action Request 23</u>
The indication of the unit is missing.
</td><td></td><td></td></tr>
<tr><td>B.7.1.5. Parameter Title:
$P_{HNO3, y}$</td><td></td><td>
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<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>No</td></tr>
<tr><td>Correct reference to standards?</td><td>No</td></tr>
<tr><td>Indication of accuracy provided?</td><td>No</td></tr>
<tr><td>QA/QC procedures described?</td><td>No</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>No</td></tr>
</table>
<u>Corrective Action Request 24</u>
Accuracy should be mentioned and description should not refer to NDIR at this is not relevant for the parameter.
</td><td>CAR24</td><td></td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
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$CI_{N2O,i}$</td><td></td><td>
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<tr><td>Source clearly referenced?</td><td>No</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
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<tr><td>Correct reference to standards?</td><td>No</td></tr>
<tr><td>Indication of accuracy provided?</td><td>No</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>No</td></tr>
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<u>Corrective Action Request 25</u>

Accuracy should be mentioned and the measuring point should be indicated in PDD.</td><td>CAR25</td><td></td></tr>
<tr><td>B.7.1.7. Parameter Title:
T_g</td><td></td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
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<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>No</td></tr>
<tr><td>Correct value provided for estimation?</td><td>n/a</td></tr>
<tr><td>Has this value been verified?</td><td>n/a</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>No</td></tr>
<tr><td>Indication of accuracy provided?</td><td>No</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>No</td></tr>
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</td><td>CAR26</td><td></td></tr>
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Accuracy should be mentioned and the measuring point should be indicated in PDD.</td><td></td><td></td></tr>
<tr><td>B.7.1.8. Parameter Title:
P_g</td><td></td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>n/a</td></tr><tr><td>Has this value been verified?</td><td>n/a</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table>
<u>Corrective Action Request 27</u>

Accuracy should be mentioned and the measuring point should be indicated in PDD.</td><td>CAR27</td><td></td></tr>
<tr><td>B.7.1.9. Parameter Title:
G_{sup}</td><td></td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>n/a</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>n/a</td></tr><tr><td>Has this value been verified?</td><td>n/a</td></tr></table></td><td>☑</td><td></td></tr>
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<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>n/a</td></tr>
<tr><td>Indication of accuracy provided?</td><td>n/a</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
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G_{com}</td><td></td><td><table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
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<tr><td>Appropriate description?</td><td>Yes</td></tr>
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<tr><td>Has this value been verified?</td><td>n/a</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>n/a</td></tr>
<tr><td>Indication of accuracy provided?</td><td>n/a</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
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<tr><td>B.7.1.11. Parameter Title:
$A_{OR,d}$</td><td></td><td><table>
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<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>No</td></tr>
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<tr><td>Has this value been verified?</td><td>n/a</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
</table></td><td>**CAR28**</td><td></td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Correct reference to standards? — No Indication of accuracy provided? — No QA/QC procedures described? — No QA/QC procedures appropriate? — No Corrective Action Request 28 Accuracy should be mentioned and the measuring point should be indicated in PDD.		
B.7.1.12. Parameter Title: $EI_{TGH,y}$		Monitoring Checklist — Yes / No Title in line with methodology? — Yes Data unit correctly expressed? — Yes Appropriate description? — Yes Source clearly referenced? — Yes Correct value provided for estimation? — Yes Has this value been verified? — Yes Measurement method correctly described? — Yes Correct reference to standards? — No Indication of accuracy provided? — No QA/QC procedures described? — Yes QA/QC procedures appropriate? — Yes A Wattmeter will be installed for the tertiary sytem. Corrective Action Request 29 Accuracy should be mentioned.	**CAR29**	
B.7.1.13. Parameter Title: $Q_{HC,y}$		Monitoring Checklist — Yes / No Title in line with methodology? — Yes	**CAR30**	

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<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>No</td></tr>
<tr><td>Indication of accuracy provided?</td><td>No</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>
Flow meter or volume counter will be installed.
<u>Corrective Action Request 30</u>
Accuracy should be mentioned.
</td><td></td><td></td></tr>
<tr><td>B.7.1.14. Parameter Title:
$Q_{HNC,y}$</td><td></td><td>
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<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
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<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>No</td></tr>
<tr><td>Indication of accuracy provided?</td><td>No</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
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</td><td>CAR31</td><td></td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Corrective Action Request 31 Accuracy should be mentioned.		
B.7.2. Description of the monitoring plan				
B.7.2.1. Is the operational and management structure clearly described and in compliance with the envisoned situation?		Clarification Request 8 The chart as presented by the PDD does not reflect the recent situation. The organization chart is planned to be replaced with the organization chart of ISO9001 QMS.	**CR8**	
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?		See CR8 above.	See CR8	
B.7.2.3. Does the monitoring plan provide current good monitoring practice?		Corrective Action Request 32 The monitoring plan should be corrected in accordance with EN14181 or equivalent standard referred by the new methodology.	**CAR32**	
B.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisoned monitoring provisions?		Same as above.	See CAR32	
B.8. Date of completion of the application of the baseline study and monitoring methodology an the name of the responsible person(s)/entity(ies)				
B.8.1. Is there any indication of a date when determine the baseline?		The date is clearly indicated.	☑	
B.8.2. Is this in consistency with the time line of the PDD history?		It is consistent with the time line of the project development.	☑	

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.8.3.	Is information of the person(s) / entity(ies) responsible for the application of the baseline and monitoring methodology provided in consistency with the actual situation?		The information is consistent with the actual situation.	☑	
B.8.4.	Is information provided whether this person / entity is also a project participant?		The information is consistent with the actual situation.	☑	
C. Duration of the project activity / crediting period					
C.1. Duration of the project activity					
C.1.1.	Are the project's starting date and operational lifetime clearly defined and reasonable?		The project's starting date and the operational lifetime are correctly indicated and reflect the envisioned schedule for the implementation.	☑	
C.2. Choice of the crediting period and related information					
C.2.1.	Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?		The crediting period and its type are clearly defined.	☑	
D. Environmental impacts					
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts					
D.1.1.	Has an analysis of the environmental impacts of the project activity been sufficiently described?		An analysis of potential impacts is presented in brief.	☑	

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?		There are no such requirements concerning the implementation of the project activity, which addresses a small technological change at an approved industrial site.	☑	
D.1.3. Will the project create any adverse environmental effects?		The project will create no adverse impacts.	☑	
D.1.4. Are transboundary environmental impacts considered in the analysis?		Transboundary impacts are addressed by the PDD. No such impacts will occur.	☑	
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party				
D.2.1. Have identified environmental impacts been addressed in the project design?		No such impacts are considered being relevant.	☑	
D.2.2. Does the project comply with environmental legislation in the host country?		The project does not give negative environmental impact and complies with Korean regulation.	☑	
E. Stakeholders' comments				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Have relevant stakeholders been consulted?	9	A local stakeholder's meeting has been conducted by HWC on September 19, 2006 in Ulsan Lotte Hotel. 31persons including key stakeholders were invited, including Air Quality Management Division of Ulsan Metropolitan City Government, Ulju Gun, Environment Management Division of Ulsan Metropolitan City Government, Local residents, Industrial neighbours, Professors, Onsan Industrial Complex Environment Management Association, Employee (HWC), Mitsubishi Corp etc.	☑	

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
E.1.2.	Have appropriate media been used to invite comments by local stakeholders?		This meeting was announced before one week, September 12 on local news papers, biggest and 2nd biggest newspapers.	☑	
E.1.3.	If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?		For this kind of project, Korean regulation does not require stakeholder process.	☑	
E.1.4.	Is the undertaken stakeholder process described in a complete and transparent manner?		The undertaken process is described in a transparent manner.	☑	
E.2. Summary of the comments received					
E.2.1.	Is a summary of the stakeholder comments received provided?		A summary of the comments received is provided by the PDD.	☑	
E.3. Report on how due account was taken of any comments received					
E.3.1.	Has due account been taken of any stakeholder comments received?		No necessity has been reported to launch any action resulting from the stakeholders' comments.	☑	
F. Annexes 1 – 4					
Annex 1: Contact Information					
F.1.1.	Is the information provided in consistency with the one given under section A.3?		OK	☑	
F.1.2.	Is information on all private participants and directly involved Parties presented?		OK	☑	

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
Annex 2: Information regarding public funding					
F.1.3.	Is the information provided on the inclusion (if any) in consistency with the actual situation proofed by the project participants?		This is not described here. However, during on-site inspection, it is confirmed that all finance is afford by Mitsubishi Korea.	☑	
F.1.4.	If necessary: Is an affirmation available that any such funding from Annex-I-countries does not result in a diversion of ODA?		Not applicable.	☑	
Annex 3: Baseline information					
F.1.5.	If additional background information on baseline data is provided: Is this information in consistency with data presented by other sections of the PDD?		Corrective Action Request 33 Unit of pressure Mpa should be met with the unit used in the former chapter, Pa. Moreover, this annex is to be reconfirmed after revising of PDD.	**CAR33**	
F.1.6.	Is the data provided verifiable? Has sufficient evidence been provided to the validation team?		See above	See CAR33	
F.1.7.	Does the additional information substantiate statements given in other sections of the PDD?		See above.	See CAR33	
Annex 4: Monitoring information					
F.1.8.	If additional background information on monitoring is provided: Is this information in consistency with data presented by other sections of the PDD?		See Corrective Action Request: 32 The monitoring plan should be corrected in accordance with EN14181 or equivalent standard referred by new methodology.	See CAR32	

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
F.1.9.	Is the information provided verifiable? Has sufficient evidence been provided to the validation team?		See above	See CAR32	
F.1.10.	Do the additional information / procedures substantiate statements given in other sections of the PDD?		See above.	See CAR32	

Industrie Service

Table 1b Conformity of Project Activity and PDD (Second Global Stakeholder Consultation Process)

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
A. General description of project activity					
A.1. Title of the project activity					
A.1.1.	Does the used project title clearly enable to identify the unique CDM activity?		The project title clearly enables the identification of the CDM activity. No second CDM activity exists with a similar title or at the same site.	☑	☑
A.1.2.	Are there any indication concerning the revision number and the date of the revision?		The revision number and the date of the issuance of this revision is correctly indicated	☑	☑
A.1.3.	Is this consistent with the time line of the project's history?		The given dates are in consistency with the time line of the project development.	☑	☑
A.2. Description of the project activity					
A.2.1.	Is the description delivering a transparent overview of the project activities?	4	The description of the project activity delivers a transparent overview of the project activities. The increase in production only based on maximizing the amount of operation hours only. It is indicated that the design capacity is already applied. Data is not available from similar plants regarding the confirmation of the reduction efficiency. However, there are no technical risks because the technology itself – although not yet widely commercialized – refers to well experienced components.	☑	☑
A.2.2.	What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1	During on-site inspection, production data from 2002 to 2006 were confirmed. The plant restarted commercial operation after its transfer from Incheon to Onsan in early 2005. A project planning schedule has been submitted to the validation team.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
A.2.3.	Is the information provided by these proofs consistent with the information provided by the PDD?		The information provided by above proof is consistent with PDD.	☑	☑
A.2.4.	Is all information presented consistent with details provided by further chapters of the PDD?		All information is consistent with details provided in later chapters.	☑	☑
A.3. Project participants					
A.3.1.	Is the form required for the indication of project participants correctly applied?		The form indicating project participants is correctly applied	☑	☑
A.3.2.	Is the participation of the listed entities or Parties confirmed by each one of them?		Contact responsible persons of all parties involved are indicated in Annex 1 of PDD.	☑	☑
A.3.3.	Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?		The information on the project proponents is consistent throughout the documents.	☑	☑
A.4. Technical description of the project activity					
A.4.1.	*Location of the project activity*				
A.4.1.1.	Does the information provided on the location of the project activity allow for a clear identification of the site(s)?		The information provided on the project activity clearly enables the identification of this project's location. The address of the plant is given as well as corresponding maps and an image by Google™Earth.	☑	☑
A.4.1.2.	How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?		For this project neither any construction approval or license nor an EIA is required. Three companies, HWC, Mitsubishi and Mitsubishi Korea participate in this project. Operation, maintenance and monitoring will be done by HWC while financing is given by Mitsubishi Korea..	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
A.4.2.	*Category(ies) of project activity*				
A.4.2.1.	To which category(ies) does the project activity belonging to? Is the category correctly identified and indicated?		The project belongs to category 5 (chemical industries), which is correctly indicated.	☑	☑
A.4.3.	*Technology to be employed by the project activity*				
A.4.3.1.	Does the technical design of the project activity reflect current good practices?	8	By introducing this technology, HWC obtains a clean technology which is not yet widely commercialized even in industrialized countries. The project technology is new a development that combines in a modular way several technologies that are already applied as for example a design used for dioxin abatement and catalyst material used for reduction of nitrous oxide. This application should consume less natural gas for tail gas heating than other comparable technologies.	☑	☑
A.4.3.2.	Does the description of the technology to be applied provide sufficient and transparent input/ information to evaluate its impact on the greenhouse gas balance?		The description of the technology allows an overview on the abatement technology including information on the additional fuel demand for reheating the tail gas that will cause additional project emissions and the additional electricity demand for operating the tertiary system which is considered as leakage emissions.	☑	☑
A.4.3.3.	Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(ies)?		The project technology is transferred from Japan to Korea.	☑	☑
A.4.3.4.	Is the technology implemented by the project activity environmentally safe?		The project does not cause any residues but only CO2 is formed. The catalyst is made by precious metals with high costs of raw material. Therefore the used catalyst will be recycled at the end of its lifetime.	☑	☑
A.4.3.5.	Is the information provided in compliance with actual situation or planning?		All information is in compliance with actual situation and project planning.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A.4.3.6. Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?		In the Republic of Korea the use of DeN_2O-technology is neither common nor regulated. Such technology is only applied in the context of CDM activities.	☑	☑
A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?		A replacement of the technology to be installed during the project period is not reasonably.	☑	☑
A.4.3.8. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?		The required monitoring procedures are deemed to be manageable for experienced staff in the chemical industry. At the initial stage, brief training for HWC operators is implemented by N_2O Analyzer supplier ABB.	☑	☑
A.4.3.9. Is information available on the demand and requirements for training and maintenance?		See above.	☑	☑
A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?		See above.	☑	☑
A.4.4. Estimated amount of emission reductions over the chosen crediting period				
A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?		The PDD uses the correct form in chapter A.4.4.	☑	☑
A.4.4.2. Are the figures provided consistent with other data presented in the PDD?		The figures provided are consistent with the excel spreadsheets used for preparing data for this PDD.	☑	☑
A.4.5. Public funding of the project activity				
A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the	5	Public funding is not applied to the project. According to Mitsubishi's internal business plan dated September 7, 2006, all cost related to this CDM project including facility are borne by Mitsubishi	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	project participants?		and Mitsubishi Korea.		
A.4.5.2.	Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	5	Public funding is not applied to the project. According to Mitsubishi's internal business plan dated September 7, 2006, all cost related to this CDM project including facility are borne by Mitsubishi and Mitsubishi Korea.	☑	☑
B. Application of a baseline and monitoring methodology					
B.1. Title and reference of the approved baseline and monitoring methodology					
B.1.1.	Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?		Reference number, version number, and title of the baseline and monitoring methodology are clearly indicated.	☑	☑
B.1.2.	Is the applied version the most recent one and / or is this version still applicable?		The PDD applies AM0028, vers. 3, which is the most recent version.	☑	☑
B.2. Justification of the choice of the methodology and why it is applicable to the project activity					
B.2.1.	Is the applied methodology considered the most appropriate one?		AM0028 is solely addressing the destruction of nitrous oxide by tertiary measures. Hence it is considered that AM0028 is the appropriate choice for this project activity also applying a tertiary technology in the tail gas stream of a nitric acid plant.	☑	☑
Integrate the required amount of sub-checklists on the applicability criteria as given by the applied methodology and comment on at least every line answered with "No"					
B.2.2.	Criterion 1: The applicability is limited to the existing production capacity measured in tons of nitric acid, where commercial production began no later than 31 December 2005. Existing production capacity is defined as	1	Applicability checklist / Yes / No Criterion discussed by the PDD? Yes Compliance provable? Yes Evidences provided by the PDD? No Compliance verified? Yes	☑	☑

<table>
<tr><th colspan="2">CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td colspan="2">the designed capacity, measured in tons of nitric acid or caprolactam per year.</td><td></td><td>This nitric acid plant was transferred from Incheon to Onsan and operation was started in January 2005. During on-site inspection production reports have been assessed proving this statement.</td><td></td><td></td></tr>
<tr><td>B.2.3.</td><td>Criterion 2:
Existing caprolactam plants are limited to those employing the Raschig process not using any external sources of nitrogen compounds other than feed ammonia.</td><td></td><td>Not applicable</td><td>☑</td><td>☑</td></tr>
<tr><td>B.2.4.</td><td>Criterion 3:
The project activity will not result in shut down of an existing N_2O destruction or abatement facility at the nitric acid or caprolactam production plant.</td><td></td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed by the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided by the PDD?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>
During on-site inspection, it was verified that no other N2O destruction unit exists in the plant.</td><td>☑</td><td>☑</td></tr>
<tr><td>B.2.5.</td><td>Criterion 4:
The project activity shall not affect the nitric acid or caprolactam production level.</td><td></td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed by the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided by the PDD?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>
During on-site inspection, the agreement between the project participants Mitsubishi and HWC is under discussion. This agreement mentions that HWC may operate and maintain at full capacity</td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th colspan="2">CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td colspan="2"></td><td></td><td>100,000tons nitric acid per year during the project time. As this is already at the maximum design capacity no impact on the production will be technically possible by the project activity.</td><td></td><td></td></tr>
<tr><td>B.2.6.</td><td>Criterion 5:
The project activity will not cause an increase in NO_X emissions.</td><td></td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed by the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided by the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>
The project facility does not form NO_x. Nonetheless it will be necessary to relocate the existing monitoring point for NO_x to be finally after the N_2O destruction unit.</td><td>☑</td><td>☑</td></tr>
<tr><td>B.2.7.</td><td>Criterion 6:
In case a $DeNO_x$ unit is already installed prior to the start of the project activity, the installed $DeNO_x$ is a Selective Catalytic Reduction (SCR) $DeNO_x$ unit.</td><td></td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed by the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided by the PDD?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>
During on-site inspection, it was verified the installed $DeNO_x$ unit is a Selective Catalytic Reduction (SCR) type</td><td>☑</td><td>☑</td></tr>
<tr><td>B.2.8.</td><td>Criterion 7:
The N_2O concentration in the flow at the inlet and the outlet of the catalytic N2O destruction facility is measurable.</td><td></td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed by the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>
Both N_2O concentrations at the inlet and the outlet will measured</td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>by analyzers. The new PDD does clearly locate the monitoring point for the inlet at the entrance of the tail gas stream to the project boundaries.</td><td></td><td></td></tr>
<tr><td colspan="5">B.3. Description of the sources and gases included in the project boundary</td></tr>
<tr><td colspan="5">Integrate the required amount of sub-checklists for sources and gases as given by the methodology applied and comment on at least every line answered with “No”.</td></tr>
<tr><td>B.3.1. Source:
Emissions of N_2O as a result of side reaction to the nitric acid or caprolactam production process
Gas(es): N_2O
Type: Baseline Emissions</td><td>8</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.3.2. Source:
Emissions related to the production of ammonia used for NO_x reduction
Gas(es): CO_2, CH_4, N_2O
Type: Baseline Emissions</td><td>8</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table>
During on-site inspection, the existence of the SCR DeNOx unit was verified.</td><td>☑</td><td>☑</td></tr>
<tr><td>B.3.3. Source:
N_2O emissions from SCR DeNOx-unit
Gas(es): N_2O
Type: Baseline Emissions</td><td>8</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Consistency with monitoring plan? — Yes		
B.3.4. Source: Emissions of N_2O as a result of side reaction to the nitric acid or caprolactam production process Gas(es): N_2O Type: Project Emissions	8	Boundary checklist — Yes / No Source and gas(es) discussed in the PDD? — Yes Inclusion / exclusion justified? — Yes Explanation / Justification sufficient? — Yes Consistency with monitoring plan? — Yes	☑	☑
B.3.5. Source: Emissions related to the production of ammonia input used for NO_x reduction Gas(es): CO_2, CH_4, N_2O Type: Project Emissions	8	Boundary checklist — Yes / No Source and gas(es) discussed in the PDD? — Yes Inclusion / exclusion justified? — Yes Explanation / Justification sufficient? — Yes Consistency with monitoring plan? — Yes No consideration in the calculations is required.	☑	☑
B.3.6. Source: Emissions at the project site resulting from hydrocarbons used as reducing agent and/or re-heating the tail gas Gas(es): CO_2, CH_4 Type: Project Emissions	8	Boundary checklist — Yes / No Source and gas(es) discussed in the PDD? — Yes Inclusion / exclusion justified? — Yes Explanation / Justification sufficient? — Yes Consistency with monitoring plan? — Yes The new PDD follows the changes given by the revision of AM0028 and counts all emissions due to the re-heating of the tail gas as project emissions.	☑	☑

<table>
<tr><th colspan="2">CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.3.7.</td><td>Source:
Emissions from electricity demand
Gas(es): CO_2, CH_4, N_2O
Type: Project Emissions</td><td>8</td><td>
<table>
<tr><th>Boundary checklist</th><th>Yes / No</th></tr>
<tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr>
<tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr>
<tr><td>Explanation / Justification sufficient?</td><td>No</td></tr>
<tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr>
</table>
<u>Clarification Request 9</u>
The project proponents decided to include these project emissions in the emission calculation although not required by the methodology. But as the methodology estimates these emissions to be lower than 0.005 % the applied technology will have a higher electricity demand resulting in project emission of approximately 0.06 %. Therefore the approach of the project proponents including these emissions although not required is conservativeness and will require more efforts on monitoring. Nonetheless it should be clarified why under “justification” there is still a copy of the (non-fitting) text of the methodology and not a description of the actual situation.
</td><td>CR9</td><td>☑</td></tr>
<tr><td>B.3.8.</td><td>Source:
Emissions related to the production of the hydrocarbons
Gas(es): CO_2, CH_4, N_2O
Type: Project Emissions</td><td>8</td><td>
<table>
<tr><th>Boundary checklist</th><th>Yes / No</th></tr>
<tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr>
<tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr>
<tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr>
<tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr>
</table>
</td><td>☑</td><td>☑</td></tr>
<tr><td>B.3.9.</td><td>Do the spatial and technological boundaries as verified on-site comply with the</td><td>8</td><td>During on-site inspection, the future project area was explained and verified.</td><td>☑</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	discussion provided by / indication included to the PDD?				
B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario					
B.4.1.	Have all technically feasible baseline scenario alternatives (at least all scenarios listed under step 1a in AM0028, vers.3) to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete?		All options as provided by step 1a of the baseline tool of this methodology have been considered within this section. There are no further scenarios that might present attractive options to those ones presented.	☑	☑
B.4.2.	Have all technically feasible alternatives (at least all scenarios listed under step 1a in AM0028, vers.3) to handle NO_x emissions been identified and discussed by the PDD?		All options as provided by step 1b of the baseline tool of this methodology have been considered within this section. It has been discussed in a convincing manner that two of the options presented by the methodology are not applicable for this project.	☑	☑
B.4.3.	Does the project identify correctly and exclude those options not in line with regulatory or legal requirements?		All remaining options comply with regulatory requirements; hence none of them has been eliminated from further discussion.	☑	☑
B.4.4.	Have applicable regulatory or legal requirements been identified?		The information on national environmental legislation is correct.	☑	☑
B.4.5.	Is a complete list of barriers developed that prevent alternatives to occur (step 3a)?		A suitable list of barriers is presented. It is claiming for investment barriers, technological barriers and barriers due to prevailing practice.	☑	☑
B.4.6.	Is transparent and documented evidence provided on the existence and significance of these barriers?		They are transparently documented in the PDD.	☑	☑
B.4.7.	Is it transparently shown that at least one of the alternatives is not prevented by the identified barriers (step 3b)?		It is discussed that the continuation of the current practice would not be prevented by any barrier.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.4.8.	Does the PDD include an appropriate discussion if and how any alternatives generate financial or economic benefits? (step 4)	5	The continuation of the recent situation is obviously neither generating additional cost nor benefits.	☑	☑
B.4.9.	In case of Option I: Is the least costly alternative clearly identified?		Not applicable	☑	☑
B.4.10.	In case of Option II: Is the most suitable financial indicator clearly identified?		Not applicable	☑	☑
B.4.11.	In case of Option II: Is the calculation of financial figures for this indicator correctly done for all remaining alternatives?		Not applicable	☑	☑
B.4.12.	In case of Option II: Is the investment analysis presented in a transparent manner providing public available proofs for data?		Not applicable	☑	☑
B.4.13.	In case of Option II: Is the sensitivity analysis evidencing the robustness of the financial attractiveness of the selected baseline scenario?		Not applicable	☑	☑
B.4.14.	In case of Option II: Have reasonable variations been applied in critical assumptions?		Not applicable	☑	☑
B.4.15.	In case of a re-assessment in the course of the project's lifetime: Are there any new or modified NO_x-emission regulations, which may address the project baseline?		Not applicable	☑	☑
B.4.16.	In case of a re-assessment in the course of the project's lifetime: Have new baseline scenarios been properly discussed re-		Not applicable	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	flecting the altered situation?				
B.4.17.	In case of a re-assessment in the course of the project's lifetime: Are there any new or modified N_2O-emission regulations, which may address the project baseline?		Not applicable	☑	☑
B.4.18.	In case of a re-assessment in the course of the project's lifetime: Have new baseline scenarios been properly discussed reflecting the altered situation?		Not applicable	☑	☑
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality):					
B.5.1.	In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?		As in chapter B.4 the investment analysis has been selected as the appropriate choice of possible methods.	☑	☑
B.5.2.	In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?		It is clearly shown that there is no economical benefit by the reduction of the nitrous oxide concentration of the tail gas flow other than the CDM revenues.	☑	☑
B.5.3.	In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?		Not applicable	☑	☑
B.5.4.	In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?		Not applicable	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.5.5.	In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?		Not applicable	☑	☑
B.5.6.	In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?		Not applicable	☑	☑
B.5.7.	In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the different alternatives to occur?	5	The new version of the PDD refers correctly to Section B.4.	☑	☑
B.5.8.	In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?		Not applicable	☑	☑
B.5.9.	In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?		Not applicable	☑	☑
B.5.10.	Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD (step 4a)?		The PDD lists correctly the amount of amount of nitric acid plants in the Republic of Korea (3), which would have also potential for installing emission reduction technology.	☑	☑
B.5.11.	If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the CDM component		It is correctly presented that the only reported similar activity in another plant is recently in preparation also using the CDM	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	(step 4b)?				
B.5.12.	Is it appropriately explained how the approval of the project activity will help to overcome the economic and financial hurdles or other identified barriers (step 5)?		As there is no other incentive than the CDM this criterion is fulfilled.	☑	☑
B.6. Emissions reductions					
B.6.1.	*Explanation of methodological choices*				
B.6.1.1.	Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	6	The discussion under section B.6.1 is referencing all formulae and emissions in compliance with the applied methodology and the project boundaries as presented earlier in the PDD. Although the treatment for changes in the legislation (N_2O, NO_x) is not explicitly integrated this is understood as being self-evident because the relevant surveillance checks are included in the monitoring plan. Hence the future verifier will take care for an appropriate treatment of any changes in the legislations. The information on the methodological approach how to determine historic operation ranges is discussed within section B.6.2 of the revised PDD.	☑	☑
B.6.1.2.	Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?		There are no such options beside the one for determining historic operation ranges. This discussion is presented within section B.6.2.	☑	☑
B.6.1.3.	Are the formulae required for the determination of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	6	Formulae for the determination of project emissions are correctly presented.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
B.6.1.4. Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	6	Formulae for the determination of baseline emissions are correctly presented.	☑	☑
B.6.1.5. Are the formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	6	The PDD considers emissions by the electricity demand of the tertiary system as leakage emissions although this is not required by the methodology. Hence the methodology does also not provide guidance how to calculate these emissions. The PDD alters a formula that is originally intended to calculate leakage emissions by altered thermal input to a tail gas turbine. It uses an ex-ante grid factor derived in other CDM projects. As this approach is not required anyway and used for improving conservativeness the calculation is deemed to be acceptable and not a deviation from the methodology but rather a voluntary measure. Nonetheless the discussion and uses of pre-defined variable is not transparently describing the actual situation. Clarification Request 10 The formula for determine leakage emission should refer to the use of electricity by the abatement technology and not for the tail gas heating. This situation should be clarified in a further revision.	**CR10**	☑
B.6.1.6. Are the formulae required for the determination of emission reductions correctly presented?		The formulae for determine emission reduction are correctly presented.	☑	☑
B.6.2. Data and parameters that are available at validation				
B.6.2.1. Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the ap-		AM0028 / Version 3 does not specify explicitly parameters to be fixed ex-ante (besides historic operation range) but the discussion under this section includes all parameter to be determined ex-	☑	☑

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>plied methodology?</td><td></td><td>ante.</td><td></td><td></td></tr>
<tr><td colspan="5">Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with “No”</td></tr>
<tr><td>B.6.2.2. Parameter Title (if applicable): EF_{NH3}</td><td></td><td>Not applicable</td><td>☑</td><td>☑</td></tr>
<tr><td>B.6.2.3. Parameter Title: Reg_{NOx}</td><td></td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>n/a</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.6.2.4. Parameter Title: $P_{product,hist}$</td><td></td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table>
The maximum of daily production and the maximum for production days per year were proven by historic production records.</td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.6.2.5. Parameter Title:
$T_{g,hist}$</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>No</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>n/a</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
</table>
Information on the measurement method for operating temperature and the position are clearly specified within section B.7.2 of the PDD, as this parameter will also be monitored after the implementation of the project by the same means as for historic data.

<u>Corrective Action Request 34</u>

The PDD claims to use option a), i.e. determination of a 97.5%-quantile for determining the historic temperature range for temperature inside the ammonia reactor. But instead of that the range has been unnecessarily been limited to a 95%-quantile cutting 2.5 % at each end of the distribution. The range should be corrected.
</td><td>CAR34</td><td>☑</td></tr>
<tr><td>B.6.2.6. Parameter Title:
$P_{g,hist}$</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>No</td></tr>
</table>
</td><td>CAR35</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>n/a</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
</table>

Information on the measurement method for operating pressure and the position are clearly specified within this section and section B.7.2 of the PDD, as this parameter will also be monitored after the implementation of the project by the same means as for historic data.

<u>Corrective Action Request 35</u>

The PDD claims to use option a), i.e. determination of a 97.5%-quantile for determining the historic range for pressure inside the ammonia reactor. But instead of that the range has been unnecessarily been limited to a 95%-quantile cutting 2.5 % at each end of the distribution. The range should be corrected.
</td><td></td><td></td></tr>
<tr><td>B.6.2.7. Parameter Title:
$G_{sup,hist}$</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>n/a</td></tr>
</table>

The supply of catalysts by the manufacturer, Johnson Matthey, was confirmed by the submitted invoices.
</td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.6.2.8. Parameter Title:
$G_{com,hist}$</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>n/a</td></tr>
</table>
Composition of catalyst, Pt 95% and Rh 5% was confirmed by invoices.
</td><td>☑</td><td>☑</td></tr>
<tr><td>B.6.2.9. Parameter Title:
$A_{OR,hist}$</td><td></td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
</table>
Information on the measurement method for ammonia flow are clearly specified within section B.7.2 of the PDD, as this parameter will also be monitored after the implementation of the project by the same means as for historic data.
</td><td>☑</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
B.6.2.10. Parameter Title: ST_{BL}		Not applicable	☑	☑
B.6.2.11. Parameter Title: ST_{PJ}		Not applicable	☑	☑
B.6.2.12. Parameter Title: η_{ST}		Not applicable	☑	☑
B.6.2.13. Parameter Title: EE_{BL}		Not applicable	☑	☑
B.6.2.14. Parameter Title: EE_{PR}		Not applicable	☑	☑
B.6.2.15. Parameter Title: η_{T}		Not applicable	☑	☑
B.6.2.16. Parameter Title: η_{TGH}		Data Checklist: Title in line with methodology? No; Data unit correctly expressed? Yes; Appropriate description of parameter? Yes; Source clearly referenced? Yes; Correct value provided? Yes; Has this value been verified? Yes; Choice of data correctly justified? Yes; Measurement method correctly described? n/a Corrective Action Request 36 Due to the voluntary approach this parameter should be clearly indicated as electricity efficiency and not efficiency of tail gas heating.	**CAR 36**	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.6.3.	*Ex-ante calculation of emission reductions*				
B.6.3.1.	Is the projection based on the same procedures as used for future monitoring?	6	The projection is done by the same algorithms as used for later monitoring.	☑	☑
B.6.3.2.	Are the GHG calculations documented in a complete and transparent manner?	6	The prognosis is relying on conservative estimations and provided in a transparent and complete manner.	☑	☑
B.6.3.3.	Is the data provided in this section consistent with data as presented in other chapters of the PDD?	6	The data provided under this section is in consistency with data in other chapters of the PDD.	☑	☑
B.6.4.	*Summary of the ex-ante estimation of emission reductions*				
B.6.4.1.	Will the project result in fewer GHG emissions than the baseline scenario?	6	The project activity will result in emission reductions	☑	☑
B.6.4.2.	Is the form/table required for the indication of projected emission reductions correctly applied?	6	The form is correctly applied	☑	☑
B.6.4.3.	Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	6	The projection is consistent with the envisioned schedule for the project implementation.	☑	☑
B.6.4.4.	Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	6	Corrective Action Request 37 The emissions reductions presented in chapter B.6.4 of the revised PDD are not consistent with other data presented by the PDD and the underlying calculation sheets. While here an annual emission reduction of 315,140 tons CO_{2e} is given, all other sections and sources are indicating 285,453 tons CO_{2e}. Additionally impact of a correct application of the oxidation factor for methane and hydrocarbons (See CAR 40 and CAR 41) should result in a correction of the figures provided.	**CAR37** See CAR40 See CAR41	☑

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td colspan="5">B.7. Application of the monitoring methodology and description of the monitoring plan</td></tr>
<tr><td colspan="5">B.7.1. Data and parameters monitored</td></tr>
<tr><td>B.7.1.1. Is the list of parameters presented in chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology?</td><td></td><td>The list of parameter provided by the PDD is not considered being complete due to CAR 40 , CAR41, CAR42 and CAR 43 (see below)</td><td>See CAR40
See CAR41
See CAR42
See CAR43</td><td>☑</td></tr>
<tr><td colspan="5">Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with “No”</td></tr>
<tr><td>B.7.1.2. Parameter Title:
$F_{TE,i}$</td><td></td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>
Reference is made to annex 4, where more details are presented indicating that EN14181 will be applied.</td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.7.1.3. Parameter Title:
$CO_{N2O,i}$</td><td></td><td>
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<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>Yes</td></tr>
<tr><td>Indication of accuracy provided?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>
Reference is made to annex 4, where more details are presented indicating that EN14181 will be applied.
</td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.4. Parameter Title:
M_i</td><td></td><td>
<table>
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<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>Yes</td></tr>
<tr><td>Indication of accuracy provided?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>
</td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>B.7.1.5. Parameter Title (if applicable):
$Q_{NH3, y}$</td><td></td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
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<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>n/a</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>Yes</td></tr>
<tr><td>Indication of accuracy provided?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>
</td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.6. Parameter Title:
$Q_{HC,y}$</td><td></td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>No</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>No</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Partly</td></tr>
<tr><td>Correct reference to standards?</td><td>Yes</td></tr>
<tr><td>Indication of accuracy provided?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>
The PDD indicates that no temperature or pressure adjustment
</td><td>CAR38</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>will be installed in case of unreasonable costs compared to the small contribution to project emissions by the tail gas heating. In case such equipment is missing this will have to be reflected in the uncertainty assessment done by the future verifier. This “open approach” is not considered being a deviation from the methodology.

<u>Corrective Action Request 38</u>

The description of the parameter $Q_{HC,y}$ is not correctly done as the methodology clearly distinguishes between methane and other hydrocarbons. The parameter $Q_{HC,y}$ refers to non-methane hydrocarbons. The flow rate of total natural gas flow has to be adjusted by the share of non-methane hydrocarbons. This has to be expressed already by the description.</td><td></td><td></td></tr>
<tr><td>B.7.1.7. Parameter Title:
ρ_{HC}</td><td></td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>
Local data is available by the natural gas supplier and will be used</td><td>CAR39</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		for later monitoring. <u>Corrective Action Request 39</u> The description of the parameter ρ_{HC} is not correctly done as the methodology clearly distinguishes between methane and other hydrocarbons. The parameter ρ_{HC} refers to non-methane hydrocarbons. It is necessary to adjust the figures by eliminating methane in the calculations.		
B.7.1.8. Parameter Title: $OXID_{HC}$		<u>Corrective Action Request 40</u> The parameter $OXID_{HC}$ is missing under the monitoring section and provided under section B.6.2. There a reference is made to an IPCC value. The methodology requests monitoring and offers the option in case of unreasonable monitoring costs to apply a figure of 0% expressing a 100 % conversion of non-methane hydrocarbons into CO2. Here the wording and formulae of the methodology are inconsistent but the intention should clearly deliver a conservative approach. As the PDD claims not to monitor the oxidation factor it should clearly apply the conservative figure (in the correct use of the formula 100 % instead of 99.5%).	**CAR40**	☑
B.7.1.9. Parameter Title: $Q_{HNC,y}$		<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr></table>	☑	☑

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<tr><td></td><td></td><td>
<table>
<tr><td>Indication of accuracy provided?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>

The PDD indicates that no temperature or pressure adjustment will be installed in case of unreasonable costs compared to the small contribution to project emissions by the tail gas heating. In case such equipment is missing this will have to be reflected in the uncertainty assessment done by the future verifier. This “open approach” is not considered being a deviation from the methodology.
</td><td></td><td></td></tr>
<tr><td>B.7.1.10. Parameter Title:
ρ_{HNC}</td><td></td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
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<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
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<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
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</td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.11. Parameter Title:
$OXID_{HNC}$</td><td></td><td><u>Corrective Action Request 41</u>

The parameter $OXID_{HNC}$ is missing under the monitoring section and provided under section B.6.2. There a reference is made to</td><td>CAR41</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>an IPCC value. The methodology requests monitoring and offers the option in case of unreasonable monitoring costs to apply a figure of 100% expressing no conversion of methane into CO2. Here the wording and formulae of the methodology are inconsistent but the intention should clearly deliver a conservative approach. As the PDD claims not to monitor the oxidation factor it should clearly apply the conservative figure (in the correct use of the formula 0 % instead of 99.5%).</td><td></td><td></td></tr>
<tr><td>B.7.1.12. Parameter Title:
$Type_{HC}$</td><td></td><td><u>Corrective Action Request 42</u>

The parameter $Type_{HC}$ is missing under the monitoring section and provided under section B.6.2. This is not acceptable as there is potential that the provider and also the gas quality may change over time.</td><td>CAR42</td><td>☑</td></tr>
<tr><td>B.7.1.13. Parameter Title:
$P_{product, y}$</td><td></td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.14. Parameter Title:</td><td></td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr></table></td><td>☑</td><td>☑</td></tr>
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<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>$CI_{N2O,i}$</td><td></td><td>
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<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
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<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>Yes</td></tr>
<tr><td>Indication of accuracy provided?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>
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</td><td></td><td></td></tr>
<tr><td>B.7.1.15. Parameter Title:
$F_{TI,i}$</td><td></td><td>
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<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
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<tr><td>Correct reference to standards?</td><td>Yes</td></tr>
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<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
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<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.7.1.16. Parameter Title:
$QR_{N2O,y}$</td><td></td><td><u>Corrective Action Request 43</u>

The parameter $QR_{N2O,y}$, $RSE_{N2O,y}$ and $CR_{N2O,y}$ are missing under the monitoring section. No reference is made that changes of regulations will have be observed and calculation might be adjusted as part of the monitoring plan.</td><td>CAR43</td><td>☑</td></tr>
<tr><td>B.7.1.17. Parameter Title:
$RSE_{N2O,y}$</td><td></td><td>See above</td><td>See CAR43</td><td>☑</td></tr>
<tr><td>B.7.1.18. Parameter Title:
$CR_{N2O,y}$</td><td></td><td>See above</td><td>See CAR43</td><td>☑</td></tr>
<tr><td>B.7.1.19. Parameter Title:
T_g</td><td></td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.20. Parameter Title:
P_g</td><td></td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
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<tr><td>B.7.1.21. Parameter Title:
G_{sup}</td><td></td><td><table>
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<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>n/a</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>n/a</td></tr>
<tr><td>Indication of accuracy provided?</td><td>n/a</td></tr>
<tr><td>QA/QC procedures described?</td><td>n/a</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>n/a</td></tr>
</table></td><td>☑</td><td>☑</td></tr>
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G_{com}</td><td></td><td><table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
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<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided for estimation?</td><td>n/a</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>n/a</td></tr>
<tr><td>Indication of accuracy provided?</td><td>n/a</td></tr>
<tr><td>QA/QC procedures described?</td><td>n/a</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>n/a</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>B.7.1.23. Parameter Title:
$A_{OR,d}$</td><td></td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>Yes</td></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
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<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>

Reference is made to annex 4, where more details are presented indicating that EN14181 will be applied.
</td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.24. Parameter Title:
EF_{ST}</td><td></td><td>Not applicable</td><td></td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.7.1.25. Parameter Title:
M_y</td><td></td><td>Not applicable</td><td></td><td>☑</td></tr>
<tr><td>B.7.1.26. Parameter Title:
EF_T</td><td></td><td>Not applicable</td><td></td><td>☑</td></tr>
<tr><td>B.7.1.27. Parameter Title:
EI_{TGH}</td><td></td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>No</td></tr>
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<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
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<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>
The PDD refers to the voluntary approach for determining also leakage emissions by the electricity consumption of the destruction unit. Here a “free variable” of the methodology is used. This is expressed in the title of the parameter that deviates from the original one. As this is a voluntary measure improving conservativeness this is deemed to be acceptable. Nonetheless it will have to be applied throughout the crediting period.</td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.28. Parameter Title:
EF_{TGH}</td><td></td><td>In consistency with the approach for the variables used for estimating leakage by electricity consumption this parameter should also be monitored. The parameter EF_{TGH} is missing under the monitoring section and provided under section B.6.2. The figure there is deemed to provide an ex-ante estimation for the grid fac-</td><td>☑</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		tor based on a registered CDM project. As this is a voluntary measure improving conservativeness this is deemed to be acceptable. Nonetheless it will have to be applied throughout the crediting period.		
B.7.2. Description of the monitoring plan				
B.7.2.1. Is the operational and management structure clearly described and in compliance with the envisoned situation?		The operational and management structure clearly described and an organizational chart of the operations is presented.	☑	☑
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?		The responsibilities are clearly provided.	☑	☑
B.7.2.3. Does the monitoring plan provide current good monitoring practice as explicetly defined by the methodology?		More details are provided in annex 4. EN14181 will be applied by the project proponents.	☑	☑
B.7.2.4. Will the three quality assurance levels been met by the planned Automated Measuring System (AMS)?		Information on the AMS is provided in annex 4. The system should be eligible to provide the required assurance level in case of proper installation and operation.	☑	☑
B.7.2.5. Are the specific performance characteristics of the monitoring system chosen by the project listed in the PDD?		More details are provided in annex 4. EN14181 will be applied by the project proponents.	☑	☑
B.7.2.6. Is information on the margins of errors and the cumulative error for the complete measurement system provided in the PDD?		Clarification Request 11 Information on the cumulative error as requested by the new revision of the methodology is not yet provided.	**CR11**	☑
B.7.2.7. Is the inculsion of external accredited services providers for calibration and function tests foreseen in the planning of the project?		Reference is made to the inclusion of accredited services within annex 4.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
B.7.2.8. Are the requirements on the treatment of downtime of the AMS clearly reflected in the envisioned calculation routines?		Routines are provided.	☑	☑
B.7.2.9. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisoned monitoring provisions?		Annex 4 provides extensive additional information on the envisioned implementation of the monitoring plan.	☑	☑
B.8. Date of completion of the application of the baseline study and monitoring methodology an the name of the responsible person(s)/entity(ies)				
B.8.1. Is there any indication of a date when the baseline was determined?		The date is clearly indicated.	☑	☑
B.8.2. Is this consistent with the time line of the PDD history?		It is consistent with the time line of the project development.	☑	☑
B.8.3. Is the information on the person(s) / entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?		The information is consistent with the actual situation.	☑	☑
B.8.4. Is information provided whether this person / entity is also considered a project participant?		The information is consistent with the actual situation.	☑	☑
C. Duration of the project activity / crediting period				
C.1. Duration of the project activity				
C.1.1. Are the project's starting date and operational lifetime clearly defined and reason-		The project's starting date and the operational lifetime are correctly indicated and reflect the envisioned schedule for the imple-	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
able?		mentation.		
C.2. Choice of the crediting period and related information				
C.2.1. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?		The crediting period and its type are clearly defined.	☑	☑
D. Environmental impacts				
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
D.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described?		An analysis of potential impacts is presented in brief.	☑	☑
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?		There are no such requirements concerning the implementation of the project activity, which addresses a small technological change at an approved industrial site.	☑	☑
D.1.3. Will the project create any adverse environmental effects?		The project will create no adverse impacts.	☑	☑
D.1.4. Were transboundary environmental impacts identified in the analysis?		Transboundary impacts are addressed by the PDD. No such impacts will occur.	☑	☑
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party				
D.2.1. Have the identified environmental impacts		No such impacts are considered being relevant.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	been addressed in the project design sufficiently?				
D.2.2.	Does the project comply with environmental legislation in the host country?		The project does not give negative environmental impact and complies with Korean regulation.	☑	☑
E. Stakeholders' comments					
E.1. Brief description how comments by local stakeholders have been invited and compiled					
E.1.1.	Have relevant stakeholders been consulted?	9	A local stakeholder's meeting has been conducted by HWC on September 19, 2006 in Ulsan Lotte Hotel. 31persons including key stakeholders were invited, including Air Quality Management Division of Ulsan Metropolitan City Government, Ulju Gun, Environment Management Division of Ulsan Metropolitan City Government, Local residents, Industrial neighbours, Professors, Onsan Industrial Complex Environment Management Association, Employee (HWC), Mitsubishi Corp etc.	☑	☑
E.1.2.	Have appropriate media been used to invite comments by local stakeholders?		This meeting was announced before one week, September 12 on local news papers, biggest and 2nd biggest newspapers.	☑	☑
E.1.3.	If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?		For this kind pf project, Korean regulation does not require stakeholder process.	☑	☑
E.1.4.	Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?		The undertaken process is described in a transparent manner.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
E.2. Summary of the comments received				
E.2.1. Is a summary of the received stakeholder comments provided?		A summary of the comments received is provided by the PDD.	☑	☑
E.3. Report on how due account was taken of any comments received				
E.3.1. Has due account been taken of any stakeholder comments received?		No necessity has been reported to launch any action resulting from the stakeholders' comments.	☑	☑
F. Annexes 1 - 4				
Annex 1: Contact Information				
F.1.1. Is the information provided consistent with the one given under section A.3?		OK	☑	☑
F.1.2. Is the information on all private participants and directly involved Parties presented?		OK	☑	☑
Annex 2: Information regarding public funding				
F.1.3. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?		This is not described here. However, during on-site inspection, it is confirmed that all finance is afford by Mitsubishi Korea.	☑	☑
F.1.4. If necessary: Is an affirmation available that any such funding from Annex-I-countries does not result in a diversion of ODA?		Not applicable.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
Annex 3: Baseline information				
F.1.5. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD?		Besides the aspects of correction as already indicated the information is consistent.	☑	☑
F.1.6. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?		The data provided is verifiable and evidences on all aspects have been submitted to the validation team.	☑	☑
F.1.7. Does the additional information substantiate / support statements given in other sections of the PDD?		The additional information substantiates the results of calculations presented in other sections.	☑	☑
Annex 4: Monitoring information				
F.1.8. If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?		The information is consistent with the monitoring section.	☑	☑
F.1.9. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?		The data provided is verifiable and evidences on all aspects have been submitted to the validation team.	☑	☑
F.1.10. Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?		The additional information substantiates the information given by the monitoring section.	☑	☑

Table 2 Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
CAR1: Hanwha and Mitsubishi Korea should be placed in the same line using Korea as Party indirectly involved.	Table 1a A.3.1	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR2: The estimations should be provided in tonnes of $CO2_e$ as required by the most recent version 06.1 of the "Guidelines for Completing the Project Design Document (PDD), and the Proposed New Baseline and Monitoring Methodologies (CDM-NM)".	Table 1a A.4.4.1	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR3: Both N_2O concentrations at the inlet and the outlet will measured by analyzer. However, the measuring point of inlet is not proper as it has to be located at the entrance of the tail gas stream to the project boundaries.	Table 1a B.2.7	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR4: The reference should be made to section B.4 as this topic changed by the new PDD format.	Table 1a B.5.7	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
CAR5: The procedures for the determination of the permitted operating range and the procedures of calculating emission reductions in case of leaving this range have to be described by the PDD.	Table 1a B.6.1.1	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR6: The provide value has another dimension (t/d) as requested by the methodology (t/yr). A conversion should be made using a potential design capacity applying maximal daily production and a reasonable figure for production days.	Table 1a B.6.2.6	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR7: The methodology how the design capacity has been determined is not provided by the PDD. This is required for ensuring the comparability.	Table 1a B.6.2.6	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR8: The provide value has a fixed value and not a range as requested. It is necessary to indicate a range for setting the permitted operating temperature. In addition, excel file of all historical data is to be submitted to auditor team for confirmation.	Table 1a B.6.2.7	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR9:	Table 1a	The project proponents submitted a revised PDD apply-	The revised PDD is respond-

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
The methodology how the operating temperature is determined is not provided by the PDD. This is required for ensuring the comparability.	B.6.2.7	ing AM0028, version 3 and responding to the requests raised under table 1a.	ing to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR10: The provide value has a fixed value and not a range as requested. It is necessary to indicate a range for setting the permitted operating pressure. In addition, excel file of all historical data is to be submitted to auditor team for confirmation.	Table 1a B.6.2.8	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR11: The methodology how the operating pressure is determined is not provided by the PDD. This is required for ensuring the comparability.	Table 1a B.6.2.8	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR12: The methodology how the maximal historic ammonia flow is determined is not provided by the PDD. This is required for ensuring the comparability.	Table 1a B.6.2.11	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR13: η_{TGH} 100% is not conservative value accord-	Table 1a B.6.2.12	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
ing to the formula (2). This parameter should be monitored and therefore should be in monitoring section B7.			issue or still unresolved issue will be indicated in table 1b. ☑
CAR14: This parameter is required to be determined annually ex-post. Hence it is required to include the density of hydrocarbons in section B.7 instead of B.6.	Table 1a B.6.2.16	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR15: This parameter is required to be determined annually ex-post. Hence it is required to include the density of methane in section B.7 instead of B.6.	Table 1a B.6.2.16	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR16: The methodology does not separate between HC and methane. The applied approach should follow the approved methodology.	Table 1a B.6.2.16	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR17: The reference source of data, IPCC 1996 Guideline, is not deemed to be appropriate. As specific data is available, this figure should be delivered from hydrogen gas supplier.	Table 1a B.6.2.18	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. ☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
CAR18: The monitoring plan does not include tail gas flow at inlet that is required by the methodology.	Table 1a B.7.1.2	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR19: The monitoring plan includes a parameter named “others for ex-ante determination”. Such information might be provided by annex 3.	Table 1a B.7.1.2	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR20: Parameter Title: $F_{TG,i}$ Accuracy should be mentioned and measuring point should be indicated in PDD.	Table 1a B.7.1.2	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR21: Parameter Title: $F_{TG,i}$ The methodology requires the application of EN14181 or equivalent to calibration. This should be followed.	Table 1a B.7.1.2	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR22: Parameter Title: $CO_{N2O,i}$ Accuracy should be mentioned and measur-	Table 1a B.7.1.3	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests	The revised PDD is responding to CARS and CRS given

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
ing point should be indicated in PDD.		raised under table 1a.	by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR23: Parameter Title: M_i The indication of the unit is missing.	Table 1a B.7.1.4	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR24: Parameter Title: $P_{HNO3,\ y}$ Accuracy should be mentioned and description should not refer to NDIR at this is not relevant for the parameter.	Table 1a B.7.1.5	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR25: Parameter Title: $CI_{N2O,i}$ Accuracy should be mentioned and the measuring point should be indicated in PDD.	Table 1a B.7.1.6	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR26: Parameter Title: T_g Accuracy should be mentioned and the measuring point should be indicated in PDD.	Table 1a B.7.1.7	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
			issue or still unresolved issue will be indicated in table 1b. ☑
CAR27: Parameter Title: P_g Accuracy should be mentioned and the measuring point should be indicated in PDD.	Table 1a B.7.1.8	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR28: Parameter Title: $A_{OR,d}$ Accuracy should be mentioned and the measuring point should be indicated in PDD.	Table 1a B.7.1.11	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR29: Parameter Title: $EI_{TGH,y}$ Accuracy should be mentioned.	Table 1a B.7.1.12	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR30: Parameter Title: $Q_{HC,y}$ Accuracy should be mentioned.	Table 1a B.7.1.13	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
			will be indicated in table 1b. ☑
CAR31: Parameter Title: $Q_{HNC,y}$ Accuracy should be mentioned.	Table 1a B.7.1.14	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR32: The monitoring plan should be corrected in accordance with EN14181 or equivalent standard referred by the new methodology.	Table 1a B.7.2.3 Table 1a F.1.8	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CAR33: Unit of pressure Mpa should be met with the unit used in the former chapter, Pa. Moreover, this annex is to be reconfirmed after revising of PDD.	Table 1a F.1.5	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
CAR 34 The PDD claims to use option a), i.e. determination of a 97.5%-quantile for determining the temperature range for temperature inside the ammonia reactor. But instead of that the range has been unnecessarily been limited to a 95%-quantile cutting 2.5 % at each end of the distribution. The range should be corrected.	Table 1b B.6.2.5	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b.	The revised PDD is responding to this request appropriately. The new figures are consistent throughout all submitted revised calculations. ☑
CAR 35 The PDD claims to use option a), i.e. determination of a 97.5%-quantile for determining the historic range for pressure inside the ammonia reactor. But instead of that the range has been unnecessarily been limited to a 95%-quantile cutting 2.5 % at each end of the distribution. The range should be corrected.	Table 1b B.6.2.6	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b.	The revised PDD is responding to this request appropriately. The new figures are consistent throughout all submitted revised calculations. ☑
CAR 36: Due to the voluntary approach this parameter should be clearly indicated as electricity efficiency and not efficiency of tail gas heating.	Table 1b B.6.2.16	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b. Generation efficiency is not required any more due to the explanations provided under the leakage discussion in section B.6.1	The revised PDD is responding to this request appropriately. The new figures are consistent throughout all submitted revised calculations. The exclusion of an efficiency factor is correctly justified. ☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
CAR 37: The emissions reductions presented in chapter B.6.4 of the revised PDD are not consistent with other data presented by the PDD and the underlying calculation sheets. While here an annual emission reduction of 315,140 tons CO_{2e} is given, all other sections and sources are indicating 285,453 tons CO_{2e}. Additionally impact of a correct application of the oxidation factor for methane and hydrocarbons (See CAR 40 and CAR 41) should result in a correction of the figures provided.	Table 1b B.6.4.4	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b.	The revised PDD is responding to this request appropriately. The new figures are consistent throughout all submitted revised calculations. An emission reduction estimation of 281,272 tons CO2e annually is corresponding to the calculation based on the verified data. ☑
CAR 38: The description of the parameter $Q_{HC,y}$ is not correctly done as the methodology clearly distinguishes between methane and other hydrocarbons. The parameter $Q_{HC,y}$ refers to non-methane hydrocarbons. The flow rate of total natural gas flow has to be adjusted by the share of non-methane hydrocarbons. This has to be expressed already by the description.	Table 1b B.7.1.6	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b.	The revised PDD is responding to this request appropriately. A conservative approach for the handling of emissions by methane and non-methane hydrocarbons is now consistently applied (in a correct manner which is not the case for the published version 3 of AM0028). ☑
CAR 39: The description of the parameter ρ_{HC} is not correctly done as the methodology clearly distinguishes between methane and other	Table 1b B.7.1.7	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b.	The revised PDD is responding to this request appropriately. A conservative approach for the handling of

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
hydrocarbons. The parameter ρ_{HC} refers to non-methane hydrocarbons. It is necessary to adjust the figures by eliminating methane in the calculations.			emissions by methane and non-methane hydrocarbons is now consistently applied. ☑
CAR 40: The parameter $OXID_{HC}$ is missing under the monitoring section and provided under section B.6.2. There a reference is made to an IPCC value. The methodology requests monitoring and offers the option in case of unreasonable monitoring costs to apply a figure of 0% expressing a 100 % conversion of non-methane hydrocarbons into CO2. Here the wording and formulae of the methodology are inconsistent but the intention should clearly deliver a conservative approach. As the PDD claims not to monitor the oxidation factor it should clearly apply the conservative figure (in the correct use of the formula 100 % instead of 99.5%).	Table 1b B.7.1.8	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b.	The revised PDD is responding to this request appropriately. A conservative approach for the handling of emissions by methane and non-methane hydrocarbons is now consistently applied (in a correct manner which is not the case for the published version 3 of AM0028). ☑
CAR 41: The parameter $OXID_{HNC}$ is missing under the monitoring section and provided under section B.6.2. There a reference is made to an IPCC value. The methodology requests monitoring and offers the option in case of unreasonable monitoring costs to apply a figure of	Table 1b B.7.1.11	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b.	The revised PDD is responding to this request appropriately. A conservative approach for the handling of emissions by methane and non-methane hydrocarbons is now consistently applied

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
100% expressing no conversion of methane into CO2. Here the wording and formulae of the methodology are inconsistent but the intention should clearly deliver a conservative approach. As the PDD claims not to monitor the oxidation factor it should clearly apply the conservative figure (in the correct use of the formula 0 % instead of 99.5%).			(in a correct manner which is not the case for the published version 3 of AM0028). ☑
CAR 42: The parameter $Type_{HC}$ is missing under the monitoring section and provided under section B.6.2. This is not acceptable as there is potential that the provider and also the gas quality may change over time.	Table 1b B.7.1.12	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b.	The revised PDD is responding to this request appropriately. ☑
CAR 43: The parameter $QR_{N2O,y}$, $RSE_{N2O,y}$ and $CR_{N2O,y}$ are missing under the monitoring section. No reference is made that changes of regulations will have be observed and calculation might be adjusted as part of the monitoring plan.	Table 1b B.7.1.16	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b.	The revised PDD is responding to this request appropriately. All three parameter are included in compliance with the approved methodology. The presentation information complies with the recent situation in Korea. ☑
CR1	Table 1a	A project planning schedule has been submitted	☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
A project planning schedule should be submitted to the validation team.	A.2.2 Table 1a B.6.4.3		
CR2 Please clarify whether - under realistic conditions - it will be possible to request registration before the expiring date of the applied version.	Table 1a B.1.2	The project proponents submitted a revised PDD applying AM0028, version 3.	☑
CR3 In case of updating the PDD towards a newer version of AM0028 (see CR1) it will be necessary including the use of fuel for tail gas heating to the project emissions an changing the monitoring approach accordingly.	Table 1a B.3.6	The change was done accordingly.	☑
CR4 It should be clearly indicated that the key factors: volume flow rate and N_2O concentration of tail gas, address the emissions after the outlet of the destruction equipment as required by the methodology.	Table 1a B.6.1.2	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CR5 Volume flow rate at the inlet of the destruction equipment is required as relevant parameter. This is not clearly expressed by the presentation of the PDD. In case of intending to use the same monitored parameter as for project emissions (outlet) this fact should be	Table 1a B.6.1.3	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
furthermore discussed in the monitoring section, providing evidence that there is no flow loss or increase in between.			
CR6 It should be considered either to request for an approval of this deviation or to consider emissions by the use of fossil fuel as project emissions by applying AM0028, vers. 2.	Table 1a B.6.1.4	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑
CR7: A new excel file should be submitted confirming the calculation of emissions.	Table 1a B.6.4.4	A new excel file has been submitted.	☑
CR8: The chart as presented by the PDD does not reflect the recent situation. The organization chart is planned to be replaced with the organization chart of ISO9001 QMS.	Table 1a B.7.2.1	The project proponents submitted a revised PDD applying AM0028, version 3 and responding to the requests raised under table 1a.	The revised PDD is responding to CARS and CRS given by table 1a. Any further new issue or still unresolved issue will be indicated in table 1b. ☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
CR9: The project proponents decided to include these project emissions in the emission calculation although not required by the methodology. But as the methodology estimates these emissions to be lower than 0.005 % the applied technology will have a higher electricity demand resulting in project emission of approximately 0.06 %. Therefore the approach of the project proponents including these emissions although not required is conservativeness and will require more efforts on monitoring. Nonetheless it should be clarified why under "justification" there is still a copy of the (non-fitting) text of the methodology and not a description of the actual situation.	Table 1b B.3.7	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b. Although not required by the methodology leakage emissions by electricity consumption of the destruction unit is included for conservativeness.	The revised PDD is responding to this request appropriately. The inclusion of these leakage emissions is consistent throughout the PDD. ☑
CR10 The formula for determine leakage emission should refer to the use of electricity by the abatement technology and not for the tail gas heating. This situation should be clarified in a further revision.	Table 1b B.6.1.5	The project proponents submitted a revised PDD dated Nov 17, 2006 responding to the requests raised under table 1b. Although not required by the methodology leakage emissions by electricity consumption of the destruction unit is included for conservativeness.	The revised PDD is responding to this request appropriately. The inclusion of these leakage emissions is consistent throughout the PDD. The inclusion is transparently justified. ☑
CR11 Information on the cumulative error as requested by the new revision of the methodol-	Table 1b B.7.2.6	Annex 4 there is a clear reference that the overall data uncertainty will be dominated by the uncertainty of the determination of the project emissions. These figures are clearly expressed in the monitoring section of the	The validation team took note of this information and considers this issue being in compliance with the require-

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
ogy is not yet provided.		PDD.	ments. ☑

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

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

Annex 2: Information Reference List

Reference No.	Document or Type of Information
1	Data Records of HWC on historic operations
2	Production Control Software and Database at HWC Plant
3	Invoices from supplier of precious metal gauzes (including chemical analyses)
4	Operation License of HWC
5	Financing details conforming that no ODA is used by the project activity
6	061117_TM_historical tp dataLH1.25%cut.xls (analysis of historic operation range)
7	061117_HWC emissions.xls
8	Drawings of Engineering of Abatement Technology
9	Newspapers announcing the local stakeholder consultation process