



Industrie Service

Choose certainty.
Add value.

Validation Report

Arreon Carbon UK Ltd. Beijing Office

VALIDATION OF THE CDM-PROJECT:
POWER GENERATION BY WASTE HEAT RECOVERY
PROJECT IN HENGLAI BUILDING MATERIALS CO.
LTD., YIXING CITY, JIANGSU PROVINCE, P.R. CHINA

REPORT No. 1042258

January 25, 2008

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



Report No.	Date of first issue	Revision No.	Date of this revision	Certificate No.
1042258	2007-06-04	01	2008-01-25	-

Subject: Validation of a CDM Project	
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich Federal Republic of Germany	TÜV SÜD Contract Partner: Jiangsu TÜV Product Service Beijing Branch Unit 918, Landmark Tower 2 8 North Dongsanhuan Road Beijing 100004 P.R. China
Client: Arreon Carbon UK Ltd. Beijing Office Suite 1208, West Twin Tower B 12 Jianwai Ave. Beijing, P. R. China	Project Site(s): Yangxiang Town, Yixing City Jiangsu Province P. R. China
Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co. Ltd., Yixing City, Jiangsu Province, P. R. China	
Applied Methodology / Version: ACM0004 / Version 02	Scope(s): 1
First PDD Version: Date of issuance: 2007-04-23 Version No.: 01 Starting Date of GSP 2007-05-22	Final PDD version: Date of issuance: 2008-01-23 Version No.: 06
Estimated Annual Emission Reduction:	61.853 tons CO _{2e}
Assessment Team Leader: Dr. Sven Kolmetz	Further Assessment Team Members: Ms. Chen Xiaoying
Summary of the Validation Opinion:	
<input checked="" type="checkbox"/> 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 or the applied methodology version respectively.	
<input type="checkbox"/> 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
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)
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



Table of Contents		Page
1	INTRODUCTION	4
1.1	Objective	4
1.2	Scope	4
2	METHODOLOGY	5
2.1	Appointment of the Assessment Team	7
2.2	Review of Documents	8
2.3	Follow-up Interviews	8
2.4	Resolution of Clarification and Corrective Action Requests	9
2.5	Internal Quality Control	9
3	SUMMARY OF FINDINGS	10
4	COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS	12
5	VALIDATION OPINION	13

Annex 1: Validation Protocol
Annex 2: Information Reference List

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:

Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co. Ltd., Yixing City, Jiangsu Province, P. R. China.

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 Methodology (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 <http://ieta.org/ieta/www/pages/index.php?IdSitePage=392>) 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
<i>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.</i>	<i>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.</i>	<i>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</i>	<i>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.</i>	<i>Conclusions are presented in the same manner based on the assessment of the final PDD version.</i>



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
<i>If the conclusions from table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.</i>	<i>Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.</i>	<i>The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.</i>	<i>This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".</i>

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
<i>If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.</i>	<i>Identifier of the Request.</i>	<i>This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion.</i>

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 is written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Dr. Sven Kolmetz	ATL	☑	☑	
Ms. Liu Xiaoyan	GHG-A	☑		☑
Robert Mitterwallner	GHG-A	☑	☑	
Ms. Chen Xiaoying	T	☑		☑

Dr. Sven Kolmetz is physicist and auditor at the department “TÜV Carbon Management Service” located in the head office of TÜV Süddeutschland in Munich. Furthermore he is officially authorized expert in the verification of GHG emissions in the framework of the European Emission Trading Scheme. Before entering TÜV SÜD he worked as energy consultant for industrial companies and as consultant for the German Federal Government on instruments for the reduction of GHG emissions.

Liu Xiaoyan is a Lead auditor for environmental management systems (according to ISO 14001) at Jiangsu TUV Product Service Ltd. She is based in Beijing. In her position she is responsible for the implementation of validation, verification and certifications audits for management systems. She has received training in the CDM validation process and participated already in several CDM project assessments as an auditor.

Robert Mitterwallner is a GHG-A with a background as auditor for environmental management systems (according to ISO 14001) and expert in environmental permit procedures. He is located at the headquarter of TÜV SÜD Industrie Service in Munich. He has received training in the JI determination as well as CDM validation process and applied successfully as GHG Auditor for several scopes.

Chen Xiaoying is an auditor for environmental management systems (according to ISO 14001) at Jiangsu TUV Product Service Ltd. She is based in Beijing. In her position she is responsible for the implementation of validation, verification and certifications audits for management systems. She has received training in the CDM validation process and participated already in several CDM project assessments.

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

On May 31th, 2007 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
Mr. Jiang Zhixiang	General Secretary of "Henglai building materials Co., Ltd"
Mr. Li Jian	Chief financial officer of "Henglai building materials Co., Ltd"
Mr. Xia Xiaojin	Director of waste heat recovery plant of "Henglai building materials Co., Ltd"
Ms. Geng Jiudi	Director of statistic department of "Henglai building materials Co., Ltd"
Mr. Cui Yuxi	Electronic engineer of "Henglai building materials Co., Ltd"
Mr. Xu Zuliang	President of the workers union of "Henglai building materials Co., Ltd"
Mr. Wang Zhenning	CDM specialist of Arreon Carbon Co.,UK



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 an 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

History of the validation process

The audit team has been provided with the first version of the PDD on April 23, 2007. Based on this documentation a document review and a fact finding mission in form of an on-site audit has taken place. Afterwards the client decided to revise the PDD according to the CARs and CRs indicated in the audit process on the last day of May 2007. The final PDD version submitted in January 23, 2008 serves as the basis for the assessment presented herewith. Additional documents that are necessary for registration (IRR calculation sheet, LoA, MoC, evidences) have been submitted afterwards. Changes are not considered to be significant with respect to the qualification of the project as a CDM project based on the two main objectives of the CDM to achieve a reduction of anthropogenic GHG emissions by sources and to contribute to sustainable development.

Project description

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

The proposed project is located in Yangxiang Town, north-west of Yixing City, Jiangsu Province, P. R. China. At present, all waste heat from the clinker production lines is vented directly into the atmosphere without any utilization. The project will be using waste heat from the 2 New Suspension Preheater cement production lines (2500 t/d and 5000 t/d, respectively) to generate electricity and supply it to Jiangsu Henglai Building Materials Co. Ltd. via some transformers and transmission lines of the East China Grid. The waste heat recovery system includes 2 back kiln Suspension Preheater residual heat boilers and 2 forehead kiln AQC boilers. After the system construction is finished, waste heat from the kilns will generate electricity with steam/hot water flash distillation technology. The project will only utilize waste heat and will not consume any fuel. At the moment, all electricity is purchased from the East China Grid. The installed capacity of JH-WHRPG is 12MW and the annual generation of the project is expected to be 72,470 MWh.

The project will achieve emission reductions by supplying zero emission electricity to the corporation and substitute equivalent electricity from the East China Grid, which is dominated by thermal power. According to China Electric Yearbook 2005, the generation of thermal plants of the grid constitutes 90.22% of its total generation. Therefore, the net generation of the project will displace same amount of electricity of the grid and a certain amount of greenhouse gas (GHG) emissions will be consequently reduced as well. The annual emission reductions are expected to be 61.853 tCO₂e.

Findings

As informed above all findings are summarized in table 2 of the attached validation protocol. In total the assessment team expressed 10 Corrective Action Requests and 1 clarification request.

As all the generated electric power is being used to fulfil most part of onsite requirement of Henglai Building Material Co. no electricity is being fed into the East China Power Grid. Inconsistencies in the PDD regarding this issue have been resolved (see CAR 1).

Other necessary information of the project has been added or revised in the final version of the PDD (the specific location, training schedule, project process, starting date of crediting period, and information for the monitoring plan) (CAR 2 – 5, 9), some evidence for the LoA of UK and of China, and the protocol of local stake holders' meeting have been presented to the DOE. (CAR 10, Open Issue, CR1).



The emission factor and related parameters have been submitted according to the methodology and included in the PDD (CAR 7, 8), and the figures and descriptions in the investment analysis have been revised. (CAR 6)

Besides some further minor corrections these were the main findings. Most of the requests addressed formal aspects and inconsistencies between the documents delivered during the audit and the PDD. During the validation process the version of the additionality tool had to be updated. Besides this the project owner had to deliver additional documents regarding the IRR calculation and more detailed information regarding the monitoring of the emission reductions.

Baseline calculation

For the BM calculation the PDD adopts modified methods agreed by the EB for the approved methodologies AM0005 and AMS I.D. because plant specific data are not available in China. The emission factor of the thermal power plants is calculated by the proportion of the emissions of coal, gas and oil times the emission factor of the best available coal, gas and oil power plant as defined and published by the Chinese DNA. The new thermal capacity installation that exceeds 20% in the last years, for which data are available, is finally assessed with this factor.

The emission reductions are calculated based on the IPCC1996 values and the Chinese yearbooks 2003 – 2005 as published by the Chinese DNA on December 15th 2006. The BM factor is even smaller than the published NDRC value. These were the latest available data at the time of PDD writing. Meanwhile the new yearbooks have been published resulting in higher emission factors. Hence, the more conservative figures used in the PDD have been accepted.

Additionality

The additionality has been evidenced by barrier analysis and common practice analysis. The identified barrier that would prevent the implementation of the proposed CDM project activity was an investment barrier for construction which would not prevent the implementation of the baseline alternative: *Continue to use the electricity supplied from the East China Power Grid and continue to vent waste heat into the atmosphere without utilization.* Evidence for the Additionality of this barrier analysis has been given by references 25, 26 and 35 (Yixing country cooperate bank). The common practice analysis (reference 33) shows that all similar projects within the region are under CDM.

The Resolution of the Board of Jiangsu Henglai Building Materials Co., Company to invest on Waste Heat Recovery Project is evidencing the consideration of CDM before start of construction. The translation will be uploaded together with the PDD; the original Chinese document has been verified by our local Auditor.

Since all the open questions have been closed by the revised PDD the project is in compliance with the CDM requirements.

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=3039&Ebene2_ID=928&Ebene1_ID=26	
Starting date of the global stakeholder consultation process: 2007-05-22	
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:

Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co. Ltd., Yixing City, Jiangsu Province, P. R. China

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, 2008-01-25



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

Munich, 2008-01-25



Assessment Team Leader

Validation of the CDM Project:
Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co. Ltd., Yixing City, Jiangsu Province, P. R. China



Industrie Service

Annex 1: Validation Protocol

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD 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?	1, 5	Yes, the project title of Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd., Yixing City, Jiangsu Province, P. R. China, enables to identify the unique CDM activity clearly.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.2. Are there any indication concerning the revision number and the date of the revision?	1, 5	Yes, the version number of the PDD is 01, the complete date is 23/04/2007.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.3. Is this consistent with the time line of the project's history?	1, 5	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2. Description of the project activity				
A.2.1. Is the description delivering a transparent overview of the project activities?	1, 5, 6	<p>The project and the project activities have been described partially.</p> <p>The auditor found the electricity generated by this project is replacing the equivalent quantity of electricity from the thermal – dominated East China Power Grid. The generated electric power is being used to fulfil the on-site electricity requirement of the Building Material Co. Without the project activity, the same quantity of electricity will be purchased from the East China Power Grid.</p> <p><u>Corrective Action Request No.1.</u></p> <p>As all the generated electric power is being used to fulfil most part of onsite requirement of Henglai Building Material Co. No electricity is being feed into the East China Power Grid. All the information on the PDD should be modified accordingly.</p>	CAR1	<input checked="" type="checkbox"/>
A.2.2. What proofs are available demonstrating that the project description is in compli-	1, 5,	The planning is described in the feasibility study. The project activity is the displacement of electricity generated by thermal power	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
ance with the actual situation or planning?	6-28	plants with electricity generated by Waste Heat Recovery. The following documents are verified on site for the project activity: <ul style="list-style-type: none"> - Feasibility study - EIA - Approval of the project from local government - Construction contract - Bank loan agreement - Grid connecting agreement 		
A.2.3. Is the information provided by these proofs consistent with the information provided by the PDD?	1, 5	Yes, but see CAR1.	See CAR1	<input checked="" type="checkbox"/>
A.2.4. Is all information presented consistent with details provided by further chapters of the PDD?	1, 5	Yes, but see CAR1.	See CAR1	<input checked="" type="checkbox"/>
A.3. Project participants				
A.3.1. Is the form required for the indication of project participants correctly applied?	1, 5	The form is correctly applied by Henglai Building Materials Co., Ltd and Arreon Carbon UK Ltd, the two project participants.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3.2. Is the participation of the listed entities or Parties confirmed by each one of them?	1, 5	Open Issue The LoA of UK and of China have not been presented to the DOE. The MoC has not been provided to the DOE.	Open Issue	<input checked="" type="checkbox"/>
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)?	1, 5	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
A.4. Technical description of the project activity				
<i>A.4.1. Location of the project activity</i>				
A.4.1.1.Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1, 5	The project activity will be implemented at the Henglai Building Materials Co., Ltd, which is located in Yangxiang Town, Yixing City, Jiangsu Province, P. R. China. <u>Corrective Action Request No.2.</u> The provincial map which shows the location of Yixing City should be in English. And the geographical coordinates should be more precise including the seconds. Hence, the project should be easily be identified using Google Earth.	CAR2	<input checked="" type="checkbox"/>
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.)?	1, 5	The project is within the site of Henglai Building Materials Co., and main equipments for the Waste Heat Recovery project are ready at the power plant and will be installed before July, 2007. The power plant will be put into operation in July, 2007. It is confirmed by the validator.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>A.4.2. Category(ies) of project activity</i>				
A.4.2.1.To which category(ies) does the project activity belonging to? Is the category correctly identified and indicated?	1, 5	The project falls into Scope 1—Energy Industries. It is correctly identified and indicated in PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>A.4.3. Technology to be employed by the project activity</i>				
A.4.3.1.Does the technical design of the project activity reflect current good practices?	1, 5	Yes, the technical design of the project activity reflects current good practice, all the equipments are domestically made.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	1, 5	Yes, the project activity comprises the use of waste heat for electricity generation. There is no doubt that this technology will reduce the GHG emissions significantly.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
balance?				
A.4.3.3.Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(ies)?	1, 5	There is no technology transfer. The main generators are made by Sichuan Chefeng Electric Motor Factory, and the two sets of condensing turbines are made by Hangzhou Zhongneng Turbine Factory. Both manufactures are Chinese.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.4.Is the technology implemented by the project activity environmentally safe?	1, 5	As the project activity is the installation of a waste heat recovery reducing the regional air pollution without additional negative side effects the project can be considered to be environmentally safe.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.5.Is the information provided in compliance with actual situation or planning?	1, 5	Yes, the information provided within PDD is in compliance with actual situation and planning.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 5	As the equipment is newly installed it is state of the art and improves the common practise in China where the waste heat is normally vented to the air.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.7.Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1, 5	As the equipment has been newly installed and the life time is longer than the crediting period it can be expected that there will be no substitution.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2	During the audit it has been found that additional training is necessary because waste heat recovery is not common practice in cement industry in China.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.9.Is information available on the demand and requirements for training and maintenance?	1, 5, 17	Although the project owner have signed the power plant staff training agreement with Changxing Wutong power Co. in 27 th , Feb, 2007. But there is no statement on the PDD. <u>Corrective Action Request No.3.</u> Please provide how, and when the training has been performed,	CAR3	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		as well as the training program for the project activity on the PDD.		
A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?	1, 5	The construction work of the power plant is finished and the main equipments are installed, the power plant will be put into operation in July, 2007. <u>Corrective Action Request No.4.</u> The time schedule of the implementation of the project should be included into the PDD.	CAR4	<input checked="" type="checkbox"/>
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?	1, 5	The project emission reductions are shown in table A.3 of chapter A.4.4 in the PDD. Obviously the starting date is assumed to be 1/6/2007 as the emission reduction of the first and last year has been divided. <u>Corrective Action Request No.5.</u> The start of the crediting period will begin after the registration of as CDM project, hence the starting date should be revised to be reasonable.	CAR5	<input checked="" type="checkbox"/>
A.4.4.2. Are the figures provided consistent with other data presented in the PDD?	1, 5	See CAR5	See CAR5	<input checked="" type="checkbox"/>
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 project participants?	1, 5, 12	Yes. There is no public funding necessary; all costs are covered by bank loans and private equity. The bank loan contracts have been reviewed by the auditor.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1, 5	The statements both in this chapter and Annex 2 are consistent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD								
B. Application of a baseline and monitoring methodology												
B.1. Title and reference of the approved baseline and monitoring methodology												
B.1.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1, 2, 3	The approved methodology ACM0004 version2 and related ACM0002 version 6 are used, including the Tool for the Demonstration and Assessment of Additionality, version3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
B.1.1.2. Is the applied version the most recent one and / or is this version still applicable?	1, 2, 3	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
B.2. Justification of the choice of the methodology and why it is applicable to the project activity												
B.2.1.1. Is the applied methodology considered the most appropriate one?	1, 2, 3	Yes, ACM0004 is the only approved methodology that is applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
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 project activities that generates electricity from waste heat, waste pressure or the combustion of waste gases in industrial facilities	1, 2, 3	<table border="1"> <thead> <tr> <th>Applicability checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>Yes</td> </tr> </tbody> </table> <p>The generated electricity is not being fed into the grid. See CAR1.</p>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	See CAR1	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.3. Criterion 2: The project activity has to displace electricity generation with fossil fuel in the electricity grid or captive electricity generation from fossil fuels	1, 2, 3	<table border="1"> <thead> <tr> <th>Applicability checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>Yes</td> </tr> </tbody> </table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD										
B.2.4. Criterion 3: After the implementation of the project activity there has to be done no fuel switch in the process, where the waste heat or pressure or the waste gas is produced.	1, 2, 3	<table border="1"> <tr> <td>Applicability checklist</td> <td>Yes / No</td> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>Yes</td> </tr> </table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Applicability checklist	Yes / No													
Criterion discussed in the PDD?	Yes													
Compliance provable?	Yes													
Compliance verified?	Yes													
B.2.5. Criterion 4: If capacity expansion of an existing facility is planned during the crediting period, the added capacity must be treated as a new facility.	1, 2, 3	<table border="1"> <tr> <td>Applicability checklist</td> <td>Yes / No</td> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>N/A</td> </tr> <tr> <td>Compliance provable?</td> <td>N/A</td> </tr> <tr> <td>Compliance verified?</td> <td>N/A</td> </tr> </table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	N/A	Compliance provable?	N/A	Compliance verified?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Applicability checklist	Yes / No													
Criterion discussed in the PDD?	N/A													
Compliance provable?	N/A													
Compliance verified?	N/A													
B.3. Description of the sources and gases included in the project boundary														
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"														
B.3.1. Source: Grid electricity generation Gas(es): CO2 Type: Baseline Emissions	1, 2, 3	<table border="1"> <tr> <td>Boundary checklist</td> <td>Yes / No</td> </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>	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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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													

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD										
B.3.2. Source: Captive electricity generation Gas(es): CO2 Type: Baseline Emissions	1, 2, 3	<table border="1"> <tr> <td>Boundary checklist</td> <td>Yes / No</td> </tr> <tr> <td>Source and gas(es) discussed in the PDD?</td> <td>N/A</td> </tr> <tr> <td>Inclusion / exclusion justified?</td> <td>N/A</td> </tr> <tr> <td>Explanation / Justification sufficient?</td> <td>N/A</td> </tr> <tr> <td>Consistency with monitoring plan?</td> <td>N/A</td> </tr> </table>	Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	N/A	Inclusion / exclusion justified?	N/A	Explanation / Justification sufficient?	N/A	Consistency with monitoring plan?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Boundary checklist	Yes / No													
Source and gas(es) discussed in the PDD?	N/A													
Inclusion / exclusion justified?	N/A													
Explanation / Justification sufficient?	N/A													
Consistency with monitoring plan?	N/A													
B.3.3. Source: On-site fossil fuel consumption due to the project activity Gas(es): CO2 Type: Project Emissions	1, 2, 3	<table border="1"> <tr> <td>Boundary checklist</td> <td>Yes / No</td> </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>	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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.3.4. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PDD?	1, 2, 3	The project boundary defined in PDD includes the proposed activity, and East China Grid to which project activity is connected. This has been proven by the auditor.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario														
The baseline scenario shall be identified using procedure for Identification of the baseline scenario described in the approved consolidated method-														

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
ology ACM0004 "Consolidated baseline methodology for waste gas and/or heat and/or pressure for power generation" version 02.				
B.4.1. Have all technically feasible baseline scenario alternatives (a) - (f) to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete?	1, 2, 3	<p>All technically feasible options for waste heat to the project activity have been identified and discussed by the PDD.</p> <p>It is considered as being complete because the discussion within the PDD is following the procedures described within Methodology ACM0004 version 02.</p> <p>Alternative 1: The project activity not undertaken as a CDM project activity;</p> <p>Alternative 2: Equivalent electricity import from the grid with venting the waste heat directly to the atmosphere without utilization;</p> <p>Alternative 3: New coal fired captive power generation with continuing to vent waste heat into the atmosphere;</p> <p>Alternative 4: New renewable energy captive power generation with continuing to vent waste heat into the atmosphere;</p> <p>Alternative 5: collecting the waste heat and utilizing it in other ways.</p> <p><u>Clarification Request No. 1</u></p> <p>Option 5 for baseline B.4. alternative has not been assessed, please clarify.</p>	CR1	<input checked="" type="checkbox"/>
B.4.2. Does the project identify correctly and excludes those options not in line with regulatory or legal requirements?	1, 2, 3	<p>Yes, project participants provided evidence and supporting documents to exclude those options not in line with regulatory and legal requirements.</p> <p>Above alternatives 3 is excluded because of:</p> <p>Alternative 3 is against the Chinese power regulation. Alternative 1, 4, 5 are also excluded, it is clearly described in chapter B.4 of the PDD, due to the lack of renewable energy sources and the</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		lack of external heat demand in the vicinity of the cement plant..		
B.4.3. Have applicable regulatory or legal requirements been identified?	1, 2, 3	Yes, below regulation and legal requirements have been identified: Chinese power regulations: "State council public notice (2002) No.6", it is stipulated that construction of thermal power units with the capacity under 135MW is strictly prohibited.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.4. If baseline scenario is captive power generation (Option 1), is the estimated boiler efficiency determined due to Option A or B?	1, 2, 3	The baseline scenario has no captive power generation, hence it is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.5. If the baseline scenario is grid power imports (Option 2), is the Emission Factor calculated as in ACM0002?	1, 2, 3	Yes, the baseline scenario is grid power imports and the Emission Factor is calculated as in ACM0002.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.6. If the baseline scenario includes both captive and imported power (Option 3), is the emission factor weighted correctly?	1, 2, 3	The baseline scenario does not include captive power, this is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	1, 2, 3	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.2. In case of Option I (simple cost analysis): Is it demonstrated that the activity pro-	1, 2, 3	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
duces no economic benefits other than CDM income?				
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)?	1, 2, 3	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	1, 2, 3	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2, 3	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2, 3	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2, 3	Yes, the main barrier is investment barrier.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2, 25-27, 35	Due to the high liability/asset ratio (57%), the project owner faced the difficulty in cash flow, and repayment of bank loan. Some urge payment letters from the manufactures have been reviewed by the auditor. <u>Corrective Action Request No.6.</u> Please reorganize the wording to make the statement more clear.	CAR6	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
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?	1, 2, 3	Yes, it is. The project would not be blocked by the other option—continue to purchase electricity from the East China Grid.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	1, 2, 3	Yes, 8 similar project activities in Jiangsu Province have been identified, all of them considered as CDM activities.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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 (step 4b)?	1, 2, 3, 31	<u>Clarification Request No. 2</u> Please deliver evidence for the application for CDM of the similar project activities.	CR2	<input checked="" type="checkbox"/>
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)?	1, 2, 3	Yes, it has appropriately explained that the approval of the project activity would obvious help to overcome the economic and financial hurdles.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6. Emissions reductions				
!Integrate questions concerning methodological choices and selection of options, if necessary				
B.6.1. <i>Explanation of methodological choices</i>				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	1, 2	The calculation of the emission reduction is applied according to the steps described in ACM0002/06: <ul style="list-style-type: none"> - Calculation of the Operating Margin Emission Factor - Calculation of the Build Margin Emission Factor - Calculation of the Combined Baseline Emission Factor These steps are described in a transparent manner. The EF factors published by NDRC have been used.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final 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?	1, 2	Yes, the applied baseline is grid power imports, the emission factor is calculated as methodology ACM0002, and it's inline with the situation verified on-site.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2	Yes, the formulae to calculate the project emissions are correctly presented. The project emissions do not have to be considered in this project activity because there is no additional gas needed, the project emission is zero.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2	Yes, it uses the baseline emission formulae and enables to use and monitor the parameters.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2	No leakage is considered according to the methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.6. Are the formulae required for the determination of emission reductions correctly presented?	1, 2	Yes, the formulae required for determination of emission reductions are correctly presented.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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 applied methodology?	1, 2	Yes. A list of parameters is clearly presented. <u>Corrective Action Request No.7.</u> Please add more parameters on the section B.6.2 of the PDD according to B6.2.2 to B.6.2.11 of the protocol.	CAR7	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																		
Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with "No"																						
B.6.2.2.Parameter Title: EF _i Carbon emissions factor of fuel (estimation of project emissions)	1, 2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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> </tbody> </table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
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																					
B.6.2.3.Parameter Title: Hr Average plant efficiency	1, 2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> </tbody> </table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					
B.6.2.4.Parameter Title:	1, 2		See	<input checked="" type="checkbox"/>																		

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD	
EF _y CO2 emission factor of the grid		Data Checklist	Yes / No	CAR7	
		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided?	No		
		Has this value been verified?	No		
		Choice of data correctly justified?	No		
		Measurement method correctly described?	No		
		See CAR7.			
B.6.2.5.Parameter Title: EF _{OM,y} CO2 operating margin emission factor of the grid	1, 2	Data Checklist	Yes / No	☑	☑
		Title in line with methodology?	Yes		
		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?	Yes		
B.6.2.6.Parameter Title: EF _{BM,y} CO2 build margin emission factor of the grid	1, 2	Data Checklist	Yes / No	☑	☑
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																		
		<table border="1"> <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>	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes												
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.7.Parameter Title: $F_{i,j,y}$ Amount of each fossil fuel consumed by each power source / plant	1, 2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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> </tbody> </table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	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?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
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?	Yes																					
B.6.2.8.Parameter Title: $COEF_{i,k}$ CO2 emission factor of each fuel type and each power source / plant	1, 2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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> </tbody> </table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																		
		<table border="1"> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </table>	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes																
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.9. Parameter Title: GEN _{i,y} Electricity generation of each power source / plant	1, 2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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> </tbody> </table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	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?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
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?	Yes																					
B.6.2.10. Parameter Title: EF _{CO2,i} CO2 emission factor of fuel used for captive power generation	1, 2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> </tbody> </table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																		
B.6.2.11. Parameter Title: Eff _{captive} Energy efficiency of captive power plant (estimation of baseline emissions factor in case of captive power)	1, 2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> </tbody> </table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					
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?	1, 2	Yes, the same procedures are used for future monitoring which only considers the baseline emission and no project emission or leakage. The projection is achieved by multiplication of the baseline emission factor of the regional power grid of China times the estimated net electricity generation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		
B.6.3.2. Are the GHG calculations documented in a complete and transparent manner?	1, 2	Yes, $BE_y = EG_y * EF_y = (EG_{gen} - EG_{aux}) * EF_y = 0.8535 * 72470 = 61853 \text{ ton/year}$	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		
B.6.3.3. Is the data provided in this section consistent with data as presented in other chapters of the PDD?	1, 2	Yes, $EG_y = 72740 \text{ MWh}$, $BE_y = 61853 \text{ ton/year}$	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		
B.6.4. Summary of the ex-ante estimation of emission reductions																						
B.6.4.1. Will the project result in fewer GHG	1, 2	Yes, the project will result in fewer GHG emissions than the base-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD								
emissions than the baseline scenario?		line scenario from the formulae of $ER_y = BE_y - PE_y$ where PE_y is considered as zero in this project activity. The emission reduction equals the baseline emission, the project will result in fewer GHG emissions than the baseline scenario.										
B.6.4.2. Is the form/table required for the indication of projected emission reductions correctly applied?	1, 2	Yes, the form is correctly applied according to the PDD template.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
B.6.4.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1, 2	See CAR4.	See CAR4	<input checked="" type="checkbox"/>								
B.6.4.4. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1, 2	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
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 in chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology?	1, 2	Yes. The EGgen, and EGaux are the parameters that shall be monitored and recorded. <u>Corrective Action Request No.8.</u> The parameters monitored should be consistency with the methodology.	CAR8	<input checked="" type="checkbox"/>								
Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with "No" Replace blue text												
B.7.1.2. Parameter Title: Q _i Volume of the auxiliary fuel used by project activity (estimation of project emissions)	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No											
Title in line with methodology?	N/A											
Data unit correctly expressed?	N/A											
Appropriate description of parameter?	N/A											

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																								
		<table border="1"> <tr><td>Source clearly referenced?</td><td>N/A</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>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> </table>	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A										
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.3.Parameter Title: NCV _f Net Calorific Value of fuel (estimation of project emissions)	1, 2	<table border="1"> <tr><td>Monitoring Checklist</td><td>Yes / No</td></tr> <tr><td>Title in line with methodology?</td><td>N/A</td></tr> <tr><td>Data unit correctly expressed?</td><td>N/A</td></tr> <tr><td>Appropriate description of parameter?</td><td>N/A</td></tr> <tr><td>Source clearly referenced?</td><td>N/A</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>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> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.4.Parameter Title: EG _{Gen} Total electricity generated	1, 2	<table border="1"> <tr><td>Monitoring Checklist</td><td>Yes / No</td></tr> <tr><td>Title in line with methodology?</td><td>Yes</td></tr> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	See CAR8	<input checked="" type="checkbox"/>																				
Monitoring Checklist	Yes / No																											
Title in line with methodology?	Yes																											

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																								
(estimation of electricity generation by project activity)		<table border="1"> <tr><td>Data unit correctly expressed?</td><td>No</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>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> <p>See CAR8, This parameter is required to be measured according to the methodology. The value on the PDD is not correct, it need to be recalculated. And the data unit should be MWh/yr</p>	Data unit correctly expressed?	No	Appropriate description of parameter?	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?	Yes	Indication of accuracy provided?	No	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes						
Data unit correctly expressed?	No																											
Appropriate description of parameter?	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?	Yes																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	Yes																											
QA/QC procedures appropriate?	Yes																											
B.7.1.5.Parameter Title: EG _{AUX} Auxiliary electricity (including electrical energy utilized by the power generating equipment in the project boundary)	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr><td>Title in line with methodology?</td><td>Yes</td></tr> <tr><td>Data unit correctly expressed?</td><td>No</td></tr> <tr><td>Appropriate description of parameter?</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>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>Yes</td></tr> <tr><td>QA/QC procedures appropriate?</td><td>No</td></tr> </tbody> </table> <p>See CAR8, this parameter should be monitored but not calcu-</p>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	No	Appropriate description of parameter?	Yes	Source clearly referenced?	No	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	No	See CAR8	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	Yes																											
Data unit correctly expressed?	No																											
Appropriate description of parameter?	Yes																											
Source clearly referenced?	No																											
Correct value provided for estimation?	Yes																											
Has this value been verified?	Yes																											
Measurement method correctly described?	No																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	Yes																											
QA/QC procedures appropriate?	No																											

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																								
		lated.																										
B.7.1.6.Parameter Title: EG _y Net electricity supplied to facility	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>No</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>No</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>No</td> </tr> <tr> <td>Source clearly referenced?</td> <td>No</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>No</td> </tr> <tr> <td>Has this value been verified?</td> <td>No</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> </tbody> </table> <p>This parameter has to be calculated and cannot be measured directly. See CAR8</p>	Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No	See CAR8	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
Data unit correctly expressed?	No																											
Appropriate description of parameter?	No																											
Source clearly referenced?	No																											
Correct value provided for estimation?	No																											
Has this value been verified?	No																											
Measurement method correctly described?	No																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	No																											
QA/QC procedures appropriate?	No																											
B.7.1.7.Parameter Title: Q _{WG} Flow rate of waste gas	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</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>N/A</td> </tr> <tr> <td>Correct reference to standards?</td> <td>N/A</td> </tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																								
		<table border="1"> <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>	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A																				
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.8.Parameter Title: NCV _{WG} Net Calorific Value of the waste gas	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</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>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> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.9.Parameter Title: Q _i Flow rate of fuel i	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</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> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																								
		<table border="1"> <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> </table>	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A																
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.10. Parameter Title: NCV _i Net calorific value of fuel i	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</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>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> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.11. Parameter Title: Use the latest approved version of ACM0002 to calculate the grid emission factor. If the power generation capacity of the project plant is less or equal to 15 MW, project participants may use the	1, 2	<p>Yes, it uses the latest approved version of ACM002 to calculate the grid emission factor.</p> <p>The power generation capacity of the proposed project plant is 12 MW.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																								

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
average CO2 emission factor of the electricity system, as referred to in option (d) in step 1 of the baseline determination in ACM0002. EF _{grid,y}				
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 envisioned situation?	1, 2	Yes, the operational and management structure is clearly described in Figure B2 in section B.7.2 of the PDD and the Monitoring & Quality Control Manual which are in compliance with the envisioned situation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1, 2	Yes, the responsibilities and institutional arrangements for data collection and archiving are clearly described in the PDD, it was verified on site.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.7.2.3. Does the monitoring plan provide current good monitoring practice?	1, 2	No there is no further monitoring plan information on the Annex 4. <u>Corrective Action Request No.9.</u> There is no overview of the monitoring plan, Please provide a diagram describing the arrangement of the meters, as well as a list to show all the technical information of the monitoring plan.	CAR9	<input checked="" type="checkbox"/>
B.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1, 2	See B.7.2.3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8. Date of completion of the application of the baseline study and monitoring methodology on the name of the responsible person(s)/entity(ies)				
B.8.1.1. Is there any indication of a date when the baseline was determined?	1, 2	Yes, the baseline and the monitoring study were completed on 23/04/2007.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.8.1.2. Is this consistent with the time line of the PDD history?	1, 2	Yes, but see CAR4	See CAR4	<input checked="" type="checkbox"/>
B.8.1.3. 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?	1, 2	Yes, the information on the entity responsible for the application of the baseline and monitoring methodology provided is consistent with the actual situation. Mr. Jiang zhixiang from Henglai Building Materials. Co., Ltd and Mr. Wang zhenning , Dr. Guo juan, Ms. Zhang fang from Arreon Carbon UK Ltd. Are the persons responsible for the application of the baseline.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.1.4. Is information provided whether this person / entity is also considered a project participant?	1, 2	Yes, the entity Henglai Building Materials Co., Ltd is a project participant.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2	Yes, the project's starting date is 28/07/2006 and a 20 years operation lifetime at least has been clearly defined. This is reasonable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	1, 2	Yes, the assumed crediting time is clearly defined, but see CAR5.	See CAR5	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
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?	1, 2, 8, 9	Yes, there is an environmental impacts analysis, such as air pollution control, noise pollution control, water pollution control, ecological environment control, land use and its impact to local residents are discussed on the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1, 2, 8, 9	Yes, EIA is a must in P. R. China. The EIA has been done and approved by Wuxi EPB.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.3. Will the project create any adverse environmental effects?	1, 2	No. There are no adverse environmental effects for the project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.4. Were transboundary environmental impacts identified in the analysis?	1, 2	No transboundary environmental impacts were identified.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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 been addressed in the project design sufficiently?	1, 2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.2. Does the project comply with environmental legislation in the host country?	1, 2	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1, 2, 21	Yes. The validator has checked the survey table of questionnaires collected from stakeholders. The stakeholder groups are as be-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		low: 1. Workers from the cement plant 2. Local residents		
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	1, 2	No media has been used to invite comments by local stakeholders. Comments have been gathered through formal written questionnaires. <u>Corrective Action Request No.10.</u> How have the residents been identified? How many residents are living nearby in a radius of 5 km around the plant? What percentage of these residents has been interviewed using the questionnaire? When did the discussion forum take place? Is the invitation available? Is there a protocol of the meeting?	CAR10	<input checked="" type="checkbox"/>
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?	1, 2	There are no regulations/laws in China for carrying out the stakeholder consultation process for this project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1, 2	A survey table with questionnaires sent to stakeholders according to the plant staffs, and residents who live near to the project activity. All the identified stakeholders have been consulted and all of them had the opportunity to give comments.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2. Summary of the comments received				
E.2.1. Is a summary of the received stakeholder comments provided?	1, 2	Yes, there is a summary of the received stakeholder comments and a statistical analysis of the answers.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final 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?	1, 2	No adjustments were necessary because no adverse comments have been received.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F. Annexes 1 - 4				
F.1. Annex 1: Contact Information				
F.1.1. Is the information provided consistent with the one given under section A.3?	1, 2	Yes, it is consistent with the one given under section A3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.2. Is the information on all private participants and directly involved Parties presented?	1, 2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.2. Annex 2: Information regarding public funding				
F.2.1. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?	1, 2	There is no public funding in this project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.2.2. If necessary: Is an affirmation available that any such funding from Annex-I-countries does not result in a diversion of ODA?	1, 2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3. Annex 3: Baseline information				
F.3.1. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD?	1, 2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3.2. If additional background information on baseline data is provided: Is this in-	1, 2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
formation consistent with data presented by other sections of the PDD?				
F.3.3. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1, 2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3.4. Does the additional information substantiate / support statements given in other sections of the PDD?	1, 2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4. Annex 4: Monitoring information				
F.4.1. If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1, 2	See CAR9	See CAR9	<input checked="" type="checkbox"/>
F.4.2. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1, 2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4.3. Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1, 2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.
 Date of Completion: 2008-01-25
 Number of Pages: 34



Industrie Service

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
<p>The project and the project activities have been described partially.</p> <p>The auditor found the electricity generated by this project is replacing the equivalent quantity of electricity from the thermal –dominated East China Power Grid. The generated electric power is being used to fulfil the on-site electricity requirement of the Building Material Co. Without the project activity, the same quantity of electricity will be purchased from the East China Power Grid</p> <p><u>Corrective Action Request No.1.</u></p> <p>As all the generated electric power is being used to fulfil most part of onsite requirement of Henglai Building Material Co. No electricity is being feed into the East China Power Grid. All the information on the PDD should be modified accordingly.</p>	A.2.1.	<p>The supply system of the power plant is connected to the East China Power Grid and takes advantage of some facilities of the grid. But no power will be delivered to the grid. The description has been modified according to the situation.</p>	<p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p>The project activity will be implemented at the Henglai Building Materials Co., Ltd, which is located in Yangxiang Town, Yixing City, Jiangsu Province, P. R. China.</p> <p><u>Corrective Action Request No.2.</u></p> <p>The provincial map which shows the location of Yixing City should be in English. And the</p>	A.4.1.1.	<p>The map has been replaced with an English one and the geographical coordinates have been revised to be more precise.</p>	<p style="text-align: center;"><input checked="" type="checkbox"/></p>

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

<p>geographical coordinates should be more precise including the seconds. Hence, the project should be easily be identified using Google Earth.</p>			
<p>Although the project owner have signed the power plant staff training agreement with Changxing Wutong power Co. in 27th, Feb, 2007. But there is no statement on the PDD.</p> <p><u>Corrective Action Request No.3.</u></p> <p>Please provide how, and when the training has been performed, as well as the training program for the project activity on the PDD.</p>	A.4.3.9.	The training schedule is described in section A.4.3.	☑
<p>The construction work of the power plant is finished and the main equipments are installed, the power plant will be put into operation in July, 2007.</p> <p><u>Corrective Action Request No.4.</u></p> <p>The time schedule of the implementation of the project should be included into the PDD.</p>	A.4.3.10.	The project process is shown in table A.2 in section A.3	☑
<p>The project emission reductions are shown in table A.2. of chapter A.4.4 in the PDD. Obviously the starting date is assumed to be 1/6/2007 as the emission reduction of the first and last year has been divided</p> <p><u>Corrective Action Request No.5.</u></p> <p>The start of the crediting period will begin after the registration of as CDM project, hence the starting date should be revised to be reasonable.</p>	A.4.4.1.	The start of the crediting period has been revised to 1 st , Jan. 2008.	☑

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

<p>Due to the high liability/asset ratio (57%), the project owner faced the difficulty in cash flow, and repayment of bank loan. Some urge payment letters from the manufactures have been reviewed by the auditor.</p> <p><u>Corrective Action Request No.6.</u></p> <p>Please reorganize the wording to make the statement more clear.</p>	B.5.8.	The paragraph has been revised in page 12-13.	☑
<p>Yes. A list of parameters is clearly presented.</p> <p><u>Corrective Action Request No.7.</u></p> <p>Please add more parameters on the section B.6.2 of the PDD according to B6.2.2 to B.6.2.11 of the protocol.</p>	B.6.2.1.	Emission factor of the grid is added.	☑
<p>Yes. The EGgen, and EGaux are the parameters that shall be monitored and recorded.</p> <p><u>Corrective Action Request No.8.</u></p> <p>The parameters monitored should be consistency with the methodology.</p>	B.7.1.1	Net electricity supply was added in the parameters monitored	☑
<p>No there is no further monitoring plan information on the Annex 4.</p> <p><u>Corrective Action Request No.9.</u></p> <p>There is no overview of the monitoring plan, Please provide a diagram describing the arrangement of the meters, as well as a list to show all the technical information of the monitoring plan.</p>	B.7.2.3.	Both the diagram and moreover, the management structure was also revised in accordance with the latest information from the project owner.	☑

Validation Protocol

Project Title: Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co., Ltd.

Date of Completion: 2008-01-25

Number of Pages: 34



Industrie Service

<p>No media has been used to invite comments by local stakeholders. Comments have been gathered through formal written questionnaires.</p> <p><u>Corrective Action Request No.10.</u></p> <p>How have the residents been identified? How many residents are living nearby in a radius of 5 km around the plant? What percentage of these residents has been interviewed using the questionnaire? When did the discussion forum take place? Is the invitation available? Is there a protocol of the meeting?</p>	E.1.2.	<p>All these questions were answered in section E.1. Due to there are other cement plants in a radius of 5 km around the plant, residents in a radius of 1km are considered.</p> <p>The protocol of local stake holders' meeting has been submitted to the DOE.</p>	☑
<p><u>Open Issue</u></p> <p>The LoA of UK and of China have not been presented to the DOE.</p> <p>The MoC has not been provided to the DOE.</p>	A.3.2.	<p>Both LOA have been issued. The MoC have been submitted to the DOE.</p>	☑
<p><u>Clarification Request No.1.</u></p> <p>Option 5 for baseline B.4. alternative has not been assessed, please clarify.</p>	B.4.1	<p>PDD has been revised accordingly.</p>	☑
<p><u>Clarification Request No. 2</u></p> <p>Please deliver evidence for the application for CDM of the similar project activities.</p>	B.5.11.	<p>Evidence included in new version PDD.</p>	☑

Validation of the CDM Project:
Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co. Ltd., Yixing City, Jiangsu Province, P. R. China




Industrie Service

Annex 2: Information Reference List

Final Report	2008-01-25	Validation of the “Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co. Ltd., Yixing City, Jiangsu Province, P. R. China” Information Reference List	Page 2 of 3	 Industrie Service
--------------	------------	--	----------------	--

Reference No.	Document or Type of Information
	institute, dated June, 2006.
9.	Approval of EIA Report for CDM project“ Henglai waste heat recovery power plant” , issued by Wuxi Environmental Protection Bureau ,dated 10 th , July, 2006.
10.	Business license of “Henglai building materials Co., Led”, issued by Jiangsu administration for industry and commerce. Dated 18 th , Jan, 1994.
11.	The taxation registration certificate, issued by Jiangsu Yixing state administration of taxation, dated 11th,, Jan, 2001
12.	Bank loan contract with Bank of Jiangsu (RMB 25million), dated 2nd, Sep, 2006 Bank loan contract with Yixing country cooperate bank(RMB 24million), dated 10th, Sep, 2006
13.	Economic and social impact report for “Henglai waste heat recovery power plant” the total investment is 88.79million RMB, issued by Yixing zhongxin accounting firm, dated 21st, March, 2006
14.	The board meeting minute of CDM decision of “Henglai waste heat recovery power plant”, dated 30th, April, 2006
15.	EAPA CDM emission reduction purchase agreement with Arreon Carbon Co., UK, dated 3 rd , Aug, 2006
16.	Cement industry CDM meeting attendance list. 24 th , May, 2007. verified by the Cement industry association.
17.	Plant staff training agreement with Changxing Wutong power Co.(including equipments, and CDM etc.), dated September, 27 th , Feb, 2007
18.	Construction contract with Yixinghuayu construction and installation company, signed Aug, 2006.
19.	Project startup report of “Henglai waste heat recovery power plant” , dated 4th, April, 2006.
20.	Approval of project startup report,signed by Yixing economic and trading commission, dated 10th, April, 2006.
21.	Local Stakeholders’ comments questionnaire sample, dated June, 2006.
22.	Purchasing contract of turbine engine equipment, signed 12th, June, 2006.
23.	Purchasing contract of boiler, signed 15th, June, 2006.
24.	Purchasing contract of generator, signed 12th, June,2006.
25.	The refusing letter of loan request from Yixing country cooperate bank, (because of the bank doubts the capability of repay the loan of

Final Report	2008-01-25	Validation of the "Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co. Ltd., Yixing City, Jiangsu Province, P. R. China" Information Reference List	Page 3 of 3	
--------------	------------	--	----------------	---

Reference No.	Document or Type of Information
	Henglai building materials Co.), dated 2nd, Sep, 2006.
26.	The verified letter of Yixing country cooperate bank (testify that Henglai building materials company will get 24million RMB loan, because the project is supposed to be a CDM project), dated 16th, Sep, 2006
27.	"Raise money meeting minutes" of Henglai waste heat recovery power generation plant (mentioned that the staff of power plant refused to raise money for the project since their salary kept the same level for 3 years), dated 20th, July, 2006
28.	Project Design Document for CDM project "Power Generation by Waste Heat Recovery Project in Henglai Building Materials Co. Ltd., Yixing City, Jiangsu Province, P. R. China", version 03
29.	The grid connecting agreement, signed with Jiangsu power grid company, dated 25 th , May, 2007.
30.	Letters from equipment manufactures for urge the equipment payment of Henglai building material Co. dated May, 2007.
31.	The evidence of the similar projects' current status, all the similar projects mentioned in the PDD are under CDM application process. Issued by Jiangsu province building materials industry association, dated 15 th , Aug 2007. Submission date 16 th , Aug 2007.
32.	Local stakeholders' consultation meeting records, includes pictures and signatures of the local stakeholders. Submission date 27th, Aug 2007.
33.	Common practice evidence, issued by Jiangsu Building Material Association Cement Branch, dated 15/08/2007.
34.	The evidence of Permission to start construction, issued by Wuxi Tianjiao Construction Supervision Company, dated 2nd Aug, 2006. Submission date 21st Jan 2008.
35.	Yixing Branch, Bank of Jiangsu; Explanation about amount of the loan for Jiangsu Henglai Building Material Co., LTD.; 02/09/2006