
Validation Report

Client: Mizuho Information & Research
Institute Co., Inc.

“The Blended Cement project utilizing
the additives to decrease the clinker
content in Shanxi Guashan Cement”


Project No. JQA-C0077

(No.1812000088)

Date: 18 February 2009



JAPAN QUALITY ASSURANCE ORGANIZATION

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Approved by:  Tsutomu Matsuno	Client: Mizuho Information & Research Institute Co., Inc.

Summary:

This is the validation report for the project activity "The Blended Cement project utilizing the additives to decrease the clinker content in Shanxi Guashan Cement", proposed by Shanxi Guashan Cement (China) and Kyushu Electric Power Co., Inc. (Japan).

This project activity aims to reduce CO₂ emissions at their cement production stage through decreasing clinker content of Shanxi Guashan's P.S cement from 64% of the current level to 35% by blending blast furnace slag and an admixture, GHPC-S at adequate rate. Through the implementation of the project activity, the annual average amount of emission reductions is expected to be 70,845 tCO₂e.

The Japan Quality Assurance Organization (JQA) as a DOE conducted the validation on the basis of UNFCCC, Kyoto Protocol, relevant decisions of COP/MOP and CDM EB and the requirements in China.

Through the validation process, JQA confirmed that the proposed project documentation is in line with all requirements. Through the Certification Committee's deliberation, JQA also determined the project activity to be valid as a CDM project activity.

Report No : JQA- C0077-VaR (Version 02)	Report Title : Validation Report
Assessed by : Team Leader : Dr. Ikuo Tamori Member : Mr. Shigenari Yamamoto Mr. Hiroshi Motokawa Under Observation (UO)	Verified by : Leader : Mr. Itaru Watanabe (JQA) Member : Dr. Hiroshi Kuribayashi (External)

Abbreviations

ACM	Approved Consolidated Methodology
AM	Approved Methodology
BC	Blended Cement type
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CMP	Conference of the Parties serving as the Meeting of the Parties
COP/MOP	Conference of the Parties serving as the Meeting of the Parties
DNA	Designated National Authority
DRC	Development and Reform Commission
EB	CDM Executive Board
EIA	Environmental Impact Assessment
EPD	Environmental Protection Department
FSR	Feasibility Study Report
GB	Chinese National Standard
GHG	Greenhouse Gas
HFC	Hydrofluorocarbon
IETA	International Emissions Trading Association
ISO	International Organization for Standardization
JI	Joint Implementation
JQA	Japan Quality Assurance Organization
NDRC	National Development and Reform Commission
NGO	Non-Governmental Organization
ODA	Official Development Assistance
PC	Composite Portland Cement
PDD	Project Design Document
PP	Project Participant
PS	Portland Blast Furnace Slag Cement
QA/QC	Quality Assurance and Quality Control
SD	Sustainable Development
SEPA	State Environmental Protection Agency
UNFCCC	United Nations Framework Convention on Climate Change
UO	Under Observation

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Appendix A: CDM Validation Checklist

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1 INTRODUCTION

The Japan Quality Assurance Organization (JQA) has performed the validation on “The Blended Cement project utilizing the additives to decrease the clinker content in Shanxi Guashan Cement”, which Shanxi Guashan Cement (China) and Kyushu Electric Power Co., Inc. (Japan) plan to develop in Shanxi Province, China. This report summarizes the findings obtained during the validation process and the validation opinion.

1.1 Objective

The objective of the validation is to review whether the project activity is in conformance with the requirements defined by the UNFCCC, the Kyoto Protocol, CDM Modalities and Procedures and related decisions by COP/MOP and EB. One of the most important points to be confirmed is the achievement of GHG emission reductions in line with the Chinese Sustainable Development (SD) Policy.

1.2 Scope

The scope of this validation process is set as follows:

a) Documentation

- UNFCCC
- Kyoto Protocol
- Relevant decisions of COP/MOP and CDM-EB
- Chinese environmental laws and regulations
- Project Design Document (PDD) (Version 1.0, as of 25 December 2007) and PDD (Version 2.2, as of 10 February 2009)
- ACM0005/Version 04

b) Physical aspect

The project boundary is delineated as including Shanxi Guashan Cement, Luliang Guangsha Material as well as the North China Power Grid.

c) Organization

- Shanxi Guashan Cement (China)
- Kyushu Electric Power Co., Inc. (Japan)

d) Time frame

- The expected operational lifetime is 20 years, and the fixed crediting period of the project activity is set at 10 years.
- The project activity is expected to start on 01 January 2009 or the date after the registration.

1.3 GHG Project Description

Project Participants	: Shanxi Guashan Cement (China) : Kyushu Electric Power Co., Inc. (Japan)
Non-Annex I Party	: People's Republic of China (30 August 2002: Kyoto Protocol ratified)
Annex I Party	: Japan (4 June 2002: Kyoto Protocol ratified)
Project Site	: Jiaocheng County, Shanxi Province, People's Republic of China
Starting date of the project activity	: 20 November 2007
Expected operational lifetime of the project activity	: 20 years and 0 months
Starting date of the fixed crediting period	: 1 January 2009 or after the date of registration (whichever is later)

Length of the fixed crediting period : 10 years and 0 months
Technology transfer : Blended cement production utilizing the additives to decrease the clinker content
The total estimated reductions in tons of CO₂
: 708,455 tCO₂e

CO₂ emissions in cement manufacturing are caused mainly in clinker manufacturing. This project aims to reduce clinker content in the cement production of Shanxi Guashan Cement from the current level of 64% to 35% by blending GHPC-S to be provided by Luliang Guangsha Material. In this project, blended cement will be manufactured using blast furnace slag which is not almost used for recycling in the province.

The technology to be employed in this project activity is to decrease clinker content through the usage of GHPC-S, consequently reduce CO₂ emissions from clinker production.

The fixed crediting period of the project activity is to be 10 years. The ex-ante annual emission reductions of the proposed project are estimated to be 70,845 tCO₂e for the crediting period and the aggregate emission reductions during the fixed crediting period, 10 years is estimated to be 708,455 tCO₂e.

1.4 Validation Team

The validation team was assigned on 10 December 2007, as follows, based on the JQA CDM Quality Manual (Version 6, September 12, 2007).

Team Leader	Dr. Ikuo Tamori	JQA Certified CDM Lead Assessor
Member	Mr. Shigenari Yamamoto	JQA Certified CDM Lead Assessor
	Mr. Hiroshi Motokawa	JQA Certified CDM Assessor
		Under Observation (UO)

Both the assessors are certificated with Sectoral Scope 04 which is prescribed in ACM0005 applied to the project activity.

The role and responsibility of the team leader is mainly to prepare the validation plan including the Desk Review, the Site-visit and related documentation, and manage the validation activities of the team. The team leader is also responsible for stating the validation opinion in the validation report.

The role and responsibility of the members is to implement the Desk Review and Site-visit including the investigation of background information and interviews with the project participants and related stakeholders, and also to indicate potential Corrective Action Requests (CARs) and/or Clarification Requests (CLs) as they were derived from the validation activities.

Dr. Ikuo Tamori is a chemical engineer and qualified as a lead assessor of CDM. After involved in the research and development of the environmental protection technology at a national research institute for thirty years, he worked as an assessor for environmental management systems (ISO 14001) and later joined this department. Since he was engaged in the validation of the HFC23 decomposition project in Korea, which started as the first CDM project based on AM0001, he participated in numerous assessments of CDM and JI projects.

Mr. Shigenari Yamamoto has participated in validation teams as assessor for the HFC23 decomposition project in Korea and the landfill gas project in Armenia, and so on. He has plenty of professional experience in energy and environmental sectors of the steel making process. Before joining JQA, he had been working for Sumitomo

Metal Industries for 18 years. He also has a lot of experience of ISO14001 audit through auditing each factory in Steel Works of Sumitomo Metal Industries as the lead auditor of ISO14001.

2 VALIDATION PROCESS

The validation process of JQA consists of the following three phases:

- 1) Desk Review of the PDD and preparation of the report;
- 2) Background Investigations including the Site-visit and interviews with stakeholders including Chinese governmental officials, and preparation of the report;
- 3) Resolution of CARs and CLs.

The PDD is made publicly available on the UNFCCC and JQA websites. If JQA receives any public comments, project participants and the CDM secretariat are notified that public comments have been received. Any comments received are to be uploaded to the UNFCCC and JQA websites.

In the validation, Table 1 and Table 2 of Annex A “Validation Checklist” based on the “Guidelines for Completing the PDD (CDM- PDD), Version 06.2, 19 December 2006” prepared by JQA are utilized as a tool for validation.

The Validation Checklist serves the following purposes:

- To organize, detail and clarify the requirements a CDM project is expected to meet; and
- To ensure a transparent validation process by inducing the validator to document how a particular requirement has been validated and which conclusions have been reached.

Table 1 : Comprehensive Checklist for CDM Project Activities

Table 2 : PDD Requirements and Resolution of CARs / CLs

Problems or findings identified in the process are indicated under the titles “CAR” and/or “CL” in the checklist (Table 1 and Table 2).

CAR requires project participants to take some corrective action without fail, while CL indicates that it is desirable that the project participants take some corrective action though not mandatory. The validation process does not provide the project participants with any consulting service, but if justifiable and appropriate corrective action for CAR and CL items included in this report is taken, such action will clearly contribute to substantial improvement of PDD.

The criteria for CAR and CL are as follows:

- CAR (Corrective Action Request)
 - a) Non-compliance with laws and regulations of the host country, or
 - b) Non-conformance with requirements defined by the UNFCCC, COP/MOP, the Kyoto Protocol, Decision 4/CMP.1, Decision 1/CMP.2 and CDM-EB, or
 - c) Items which would affect CER calculation significantly.
- Clarification (Clarification Request)
 - a) Insufficient description from the view of accuracy, reliability, completeness and/or consistency, or
 - b) Vague expressions.

Finally, all the CARs and CLs are resolved through the project participant's correspondences to those requests, which are described in italics in Table 2.

2.1 Schedule

The process was implemented as follows:

- 20 December 2007: Start of Desk Review based on the PDD.
- 27 December 2007 – 25 January 2008: Publication of PDD (Version 1.0) on the UNFCCC and JQA websites
- 08 February 2008: Preparation of the Desk Review Report
- 13 - 19 March 2008: Site-visit to Jiaocheng County, Shanxi Province, China
- 28 March 2008: Preparation of the Site-visit Report
- 14 August 2008: Receipt of the revised PDD (Version 2.0)
- 15 August 2008: Preparation of the Draft Validation Report
- 19 August 2008: Certification Committee of JQA
- 18 February 2009: Receipt of the revised PDD (Version 2.2)
- 18 February 2009: Revised Validation Report

2.2 Desk Review of Documents

The Desk Review is conducted by using the Validation Checklist (Appendix), which is prepared for a CDM project activity.

The main purposes of the Desk Review are as follows:

- Confirm the completeness of the PDD in accordance with the “Guidelines for Completing the PDD (CDM-PDD), Version 06.2” including “Glossary of CDM terms (Version 03)” ;
- Review the PDD in order to judge the conformity of the project activity for the requirements;
- Collect information regarding the project activity from an independent source for verification, if necessary;
- Identify any issues to be confirmed at the Site-visit.

In addition, the main focuses of the Desk Review are as follows:

- Justification and appropriateness of the baseline and monitoring methodologies for the proposed project
- Transparency and conservativeness of the assumptions for the baseline
- Technological, political, socio-demographic and environmental and legal aspects and trends relevant to the proposed project
- Additionality of the proposed project
- Appropriateness of the calculation of GHG emission reductions
- Responsibility and authority for monitoring, measurement and recording activities in the monitoring plan including quality control and quality assurance

2.3 Background Investigations

The background investigations include the Site-visit to the project site and the interviews mainly with the key persons in the host country including local project participants and governmental officials.

The following are investigated in this process:

- SD policy in the host country including Environmental Impact Assessment

- CDM approval and authorization procedures
- Technologies related to the project activity in the host country
- Appropriateness of the project boundary including GHG emission sources
- Monitoring plan and monitoring structure
- EIA and local stakeholders consultation
- Situation of the project site including nearest towns and villages

2.4 Resolution of Clarifications and Corrective Action Requests

The project participants are requested to respond as to how to resolve the CARs and CLs listed in the Desk Review Report and the Site-visit Report.

The project participants are to resolve the CARs and CLs, which are to be reflected in the revised PDD, and submit to JQA.

2.5 Internal Quality Control

The manager of Global Environmental Assessment Division organizes the validation team after considering the following:

- Project expertise requirements;
- Assessor qualification suitable for the technical and regional aspects of the project;
- Knowledge of environmental laws and regulations in the host country.

Through the validation process, the validation team establishes the draft validation report including draft conclusion. The validation team leader submits these documents including the outline of the validation result and the conclusion of the team to the Certification Committee of JQA. The Certification Committee, upon receipt of the draft validation report from the team, deliberates on the appropriateness of the validation and its procedures, and reports the result of the judgment to the Senior Executive of JQA. Finally, the Senior Executive decides whether the project activity is valid as a CDM project activity.

3 VALIDATION FINDINGS

3.1 Participation Requirements

The project participants are Shanxi Guashan Cement (China) and Kyusyu Electric Power Co., Inc. (Japan).

The host Party, People's Republic of China and Annex I Party, Japan meets the requirements to participate in the CDM.

The Chinese DNA has issued a Letter of Approval on 30 July 2008, authorizing Shanxi Guashan Cement as a project participant (See Ref. 2). The Japanese DNA has issued the Letter of Approval on 25 April 2008, authorizing Kyusyu Electric Power Co., Inc. to voluntarily participate in the project activity (See Ref. 3).

3.2 Project Design

This project activity aims to reduce CO₂ emissions at their cement production stage through decreasing clinker content of Shanxi Guashan's P.S cement from the current level of 64% to 35% by blending blast furnace slag and an admixture, GHPC-S at adequate rate.

In general, blended cement with lower clinker content decreased to 35% does not have enough quality including the compressive strength in 3 days. The key technology of the CDM project activity is the use of a special admixture, GHPC-S developed by Luliang Guangsha Material which is located about 5 km apart from the PP, Shanxi Guashan Cement. The technology has been developed in cooperation with several researchers including professors of not only Chinese universities but also Japanese universities, and obtained several awards for its superior performance (See Ref. 56 and 57).

Through the Desk Review CAR 1 was issued regarding the technology. In the revised PDD it is described that the technology had been developed as the concrete admixture in 1990s, and later have been developed as the cement admixture in cooperation with Japanese professors and Chinese experts. A lot of academic papers showing the research works are listed in the footnotes of the revised PDD (See Ref. 20, 21 and 25).

Certificates of the technology indicating the superior performance in accordance with the national standard for P.S cement (GB 1344-1999) of China were issued by a third party, Civil Architectural Society of Shanxi Province, and Taiyuan University of Technology (See Ref. 26 and 60).

The technology is to be adopted as a CDM project by Shanxi Guashan Cement, one of the major cement manufacturers in the province, producing 360 kt/y (2007) which will be 600 kt/y from 2009 due to introduction of the blended cement technology.

Shanxi Province is one of the biggest provinces in natural resources and energy production in China. A lot of iron and steel manufacturing factories are located in the province and the byproduct of the industry, blast furnace slag is much abundant around the cement company (See Ref. 24). The slag purchase agreements have been already exchanged with four iron and steel companies located within 20 km from the cement company (See Ref. 15). The purchase agreement for GHPC-S was also exchanged between the cement company and Luliang Guangsha Material.

The project boundary is appropriately delineated as "The project boundary includes only CO₂ emissions from the cement production plants and the power generation in the grid" in accordance with the methodology. Through the Desk Review CAR 3 was issued because the leakage due to transportation of blast furnace slag and admixture

GHPC-S was absent from Table 5. The leakage is built in and calculated in the revised PDD.

Regarding the starting date of the crediting period CAR 6 was issued, because the date of the PDD, 01/07/2007 was not possible at the date of the issuance of the Desk Review Report. After the date was changed to 01/10/2008, it was changed again to 01/11/2008. The date is further revised to 01/01/2009, taking the decision (Para. 64) of CDM-EB-41 into account.

The expected operational lifetime of the project activity is set as 20 years, which was assumed taking into account the general lifetime of the cement production line.

3.3 Baseline

ACM0005 (Version 04) "Consolidated Baseline Methodology for increasing the Blend in Cement Production" is applied to the project as the approved baseline methodology. The methodology is applicable to projects that increase the share of additives (i.e. blast furnace slag in this case) in the production of cement types beyond current practices in the country. Through the Desk Review CAR 2 was issued because the above-mentioned prerequisite was absent from the PDD. It is described in the revised PDD.

The PDD appropriately justifies three applicability conditions prescribed by the methodology. Regarding the first condition "There is no shortage of additives related to the lack of blending materials", the PDD demonstrates Table 3 which shows four companies will supply the sufficient volume of slag to the project (See Ref. 8). During the Site-visit the slag purchase agreements exchanged with four companies were confirmed (See Ref. 15). One of the agreements was investigated through visiting the company and confirmed. The second condition is "This methodology is applicable to domestically sold output of the project activity plant and excludes export of blended cement". Table 4 shows that the P.C cement was sold only within the province. Through the interview during the Site-visit, a key person of Building Material Industry Administration Office of Shanxi Province declared the P.C cement produced in the province had never been sold due to the characteristics of the product to not only overseas but also neighboring provinces, and that a part of P.S cement is exported to other provinces. The third condition, "Adequate data are available on cement types in the market" was confirmed through visiting Building Material Industry Administration Office of Shanxi Province which is responsible for all the situation and issues on the cement production in the province (See Ref. 27 and 28).

Regarding the baseline scenario, after three scenarios are discussed in the PDD, "(iii) A continuation of the blended level to produce P.S cement" is chosen as the most probable baseline scenario.

According to ACM0005/Version 04 the baseline emissions for the production of blended cement (P.S) are determined as the total of "CO₂ emissions per tonne of clinker in the baseline in the project plant" ($BE_{clinker}$) multiplied by "Baseline benchmark of share of clinker per tonne of BC updated for year y" ($B_{Blend,y}$) and "Baseline electricity emissions for BC grinding and preparation of additives" ($BE_{elec_ADD_BC}$). Through the Desk Review CAR 5 was issued because there was no reference to the emission factors for calculating the electricity consumption provided on 9 August 2007 by the Chinese DNA and the process of calculating the emission factors was not shown. In the revised PDD the reference is introduced and the process of calculating the emission factors is shown.

The first element in the calculation of baseline emissions is to establish the benchmark of the clinker. The benchmark baseline for the base year, 2007 is discussed as to three options. As a result of calculation, Option (ii), 54.7% is chosen

as the lowest value among them. Although there is no clear trend evident in the additive blend in the region, Shanxi Province, nor sufficient data to estimate such trend, the default value, annual 2% increase is adopted. The data of Table 8 was confirmed to be in accordance with the data supplied by Building Material Industry Administration Office of Shanxi Province through the Site-visit (See Ref. 28).

Regarding the market acceptability barriers, the methodology cites two phases; in perception of inferior quality and lack of awareness of customers. The PDD describes the existence of the barriers and how to conquer the barriers using four measures.

3.4 Additionality

Utilizing the “Tool for the demonstration and assessment of additionality” (Version 04), additionality is discussed regarding Step 2. Investment analysis, Step 3. Barrier analysis which covers 1. technological barriers, 2. Barriers due to prevailing practice and 3. market acceptability analysis, and Step 4. Common practice analysis.

Of the main parameters used for financial calculation (Table 13) the biggest term, GHPC-S (Admixture) was found to be 3000 Yuan/t in the purchase agreement exchanged between the cement company and Luliang Guangsha Material (See Ref. 14). The price 2600 Yuan/t in the PDD (Version 1.0) was substituted in the revised PDD. These values shown in Table 13 and Table 14 were confirmed to be coincided with those in the Feasibility Study Report, 2008 (See Ref. 31).

Regarding the additionality ten CLs were issued including the requests for identifying the data sources of both the tables. In the revised PDD those sources are shown under the tables, and several descriptions are added, focusing on maintaining the quality of the blended cement through the appropriate blending ratio and particle size distribution of cement.

Because the starting date of the project activity was established as 10 September 2007 when is before the date of validation, it was requested for the PPs to provide evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity (See Ref. 32). It was the date when the Board Meeting of Shanxi Guashan Cement decided the project as CDM. Prior to the decision there was a series of meetings and discussions by the PPs with stakeholders including the meeting with 16 officials of local governments held on 4 September 2007 (See Ref. 37-40). After the decision of EB41 the validation team requested the PP to review the starting date. As the result it is changed to 20 November 2007 when the contract on the long-term purchase of admixture GHPC, which is indispensable for the project activity, was signed (See Ref. 14).

3.5 Monitoring Plan

ACM 0005 (Version 04) “Consolidated Monitoring Methodology for increasing the Blend in Cement Production” is applied to the project as the approved monitoring methodology.

Regarding the “Data and parameters that are available at validation:” (B.6.2), through the Desk Review and the Site-visit several CLs were issued. During the Site-visit it was found out that CaO in clinker, MgO in raw material, etc. were analyzed, based on GB at the chemical laboratory of the company every eight hours or every time the raw material is brought in the plant. For CL issued during the Site-visit, it is added that “Plant record” for “Source of data used:” is based on the average of actual operation data during the three years (2004 – 2006). Another CL was pointed out due

to the absence of a term, BC_{BSL} , actual production of BC in the base year, which is afterwards added in the revised PDD.

Regarding the “Data and parameters monitored:”(B.7.1), four CLs were issued. Several monitoring items were confused in “Data unit” and “Value of data applied”. All of these are reviewed and revised. National standards such as GB are added as the measurement methods for these monitoring items after the Site-visit because these standards could be identified at the company (See Ref. 41-43 and 51-53). It was also found out during the Site-visit that the electricity consumption at the factory was daily monitored by the power meter for each facility at the energy center. The fact is added in the revised PDD with the description “Meters are calibrated once a year in accordance with GB3924-1983”.

3.6 Calculation of GHG Emissions and Reductions

GHG emissions and reductions are appropriately calculated based on the equations according to the methodology. The detail of the calculation is clearly shown in the tables of B.6.3 and Annex 3 of the revised PDD. The calculation of baseline emissions is conducted through setting “ $B_{Blended}$, Baseline benchmark of share of clinker per tonne of BC (tonne of clinker/tonne of BC)” in 2007 at 54.7%, and increasing trend of a minimum of 2% increase in additives over the percentage of additives every year.

Through the Desk Review three CARs were issued regarding the calculation of GHG emissions. CAR 4 was regarding GHG emission due to the introduction of the admixture. Finally GHG emissions due to electricity used for mixing of raw materials to produce the admixture as well as the leakage due to transportation of the admixture are included in the calculation of the revised PDD. CAR 3 and CAR 5 were also resolved as mentioned in 3.2 and 3.3, respectively, while CAR 3 referred to the leakage due to transportation (See Ref. 36 and 45) and CAR 5 referred to the emission factors of national grid. After that CAR 5’ was issued in relation to the calculation of the emission factors because the calculation did not take into account “Tool” issued by EB35. The emission factors are recalculated in the revised PDD.

3.7 Environmental Impacts

The project activity is considered to serve the environmental improvement through reducing the volume of clinker produced by calcination of lime stone and utilizing the blast furnace slag most of which has been disposed of to landfill or illegally dumped away on the field.

However, the project activity is also controlled under the EIA Law, and it was requested to prepare EIA Registration Report (See Ref. 5). The Report was approved on 21 January 2008 by the county government (See Ref. 6). After issuing CLs, these facts are described in the revised PDD. Application of GB(HJ) “Cleaner Production Standard – Cement Industry” to the project activity is also discussed.

3.8 Comments by Local Stakeholders

3.8.1 Public Consultation

The local public consultation was conducted through two routes by the PP. One was for 16 officials of the local governments, and the other was for the residents who

live near the project site. Several residents of Zhaolin Village and Tang Village, both of which are located 1 km apart from the factory, were interviewed by the validation team (See Ref. 37).

They agreed to the CDM project because it aims at contributing to environmental improvement through producing the blended cement using the blast furnace slag which has been discarded until now, while some fields for agriculture have been occupied with slag (See Ref. 12).

3.8.2 Interview with Government Officials

1) Development and Reform Commission (DRC), Jiaocheng County

- The SD policy of China regards the circulation-type economy and energy saving as very important. The project activity is considered to be in accordance with the SD policy.
- Jiaocheng County has been designated as a model town of the circulation-type economy by Shanxi Province Government in 2004. It is only one case of the designation as the county level. The county targets especially on recycling of resources and industrial wastes in coke industry, iron and steel industry and glass industry.
- The main waste in iron and steel industry is blast furnace slag, and the recycle ratio is not quite high because of deficit of the market. The recycle ratio of the slag of 18 million tons generated per year is about 70%. The quality of the products recycled for building material is not good. The remaining 30% of the slag byproduct is left piled in the open air or illegal dumping.
- The blended cement CDM project is the first case not only in Shanxi Province, but also in China. The officials of the local government are concerned in the development of the project activity.
- Jiaocheng County DRC is discussing some priority for promoting industrial waste recycling. It should be taken into account that recycling is not profitable for companies.
- NDRC is now promoting the circulation-type economy policy, and a draft law has been issued. At present the subsidy for recycling supported by the nation is very small.
- The project has the following strong points:
 - in compliance with the sustainable development policy of China;
 - to contribute to decreasing the environmental loads; and
 - to counterbalance the demerit of the project through implementing it using the CDM scheme while the recycle project utilizing the blast furnace slag is not profitable for private companies.

2) Environmental Protection Department (EPD), Jiaocheng County

- The EIA Registration Report of the project activity was submitted to Jiaocheng County EPD under the EIA Law. It has been approved on 21 January 2008 by the EPD (See Ref. 5 and 6).

- Jiaocheng County EPD surveyed twelve cement factories in 2007 under Cleaner Production Promotion Law. Shanxi Guashan Cement passed the assessment first in Shanxi Province. The environmental performance of Shanxi Guashan Cement is quite good in accordance with the emission standards, and no problem (See Ref. 9-11).
 - Although the project activity does not give any negative impacts to environment, Jiaocheng County EPD requested the project participants to undertake the stakeholder consultation.
 - Stakeholder consultation was conducted through visiting the homes and offices of ten persons consisting of teachers, workers and farmers. All the answers were supportive to the CDM project, and there was no objection at all (See Ref. 12, 37 and 58).
 - The blended cement CDM project using the special admixture developed by Luliang Guangsha Material is the first case not only in Shanxi Province, but also in China. The officials of the local government are concerned about the development of the project activity.
- 3) Environmental Protection Department (EPD), Luliang City
- Jiaocheng County EPD is performing the works under the leadership of Luliang City EPD.
 - The project is highly assessed as the CDM project in China, combining the cement production with the CDM scheme. It is a very nice project for reducing the limestone consumption and CO₂ emissions through increasing the use of blast furnace slag for cement production.
 - Although the admixture is expensive, the project is able to reduce emission, and hopeful in future. The EPD is ready for supporting the project.

4 GLOBAL STAKEHOLDER PROCESS

4.1. Description of how and when the PDD was made publicly available:

The comments by Parties, stakeholders and NGOs were invited from 27/12/2007 to 25/01/2008 on the UNFCCC website.

4.2. Description of how comments were received and made publicly available:

There was no comment received.

4.3. Explanation of how due account has been taken of comments received:

Not applicable

4.4 Compilation of all comments received:

Not applicable

5 VALIDATION OPINION

1. JQA performed the validation of “The Blended Cement project utilizing the additives to decrease the clinker content in Shanxi Guashan Cement” by conducting Desk Review of the PDD (Version 1.0 and Version 2.2) presented by Mizuho Information & Research Institute Co., Inc., in view of the UNFCCC, the Kyoto Protocol, Decision 3/CMP.1, relevant decisions of COP/MOP and the CDM EB and Chinese environmental laws and regulations, and also by making follow-up interviews including investigation of the Site-visit in Shanxi Province, China. The results of reviews were described in the Desk Review Report making use of the CDM Validation Checklist. Where the validation team had identified issues which needed clarification or presented a risk to the fulfillment of the project activity, CARs or CLs were issued in the checklist, and the reasons for them were explained in the column “Comments.”
Finally, all of the CARs and CLs have been resolved through the correspondence by the PPs. The resolutions are explained in italic in the column.
2. Contribution of the project to SD is described in the PDD. The project contributes to the reduction of not only the environmental burdens such as CO₂, air pollutants and industrial wastes, but also natural resources such as limestone, plaster and fluorite. Contribution to SD is certainly recognized through interviews with stakeholders during the Site-visit, although the recycling using the blast furnace slag is not beneficial due to the use of high-cost admixture.
3. One of the most important elements in the project activity is the technology, the admixture technology. A little bit different from the conventional blended cement technology, the project activity adopts a special admixture, GHPC-S besides the additive of blast furnace slag. Generally, it is difficult to increase the ratio of additives to higher levels whilst maintaining the quality of the cement. There is still a general perception that the quality of such blended cement is inferior to that of usual cement. In this project activity the admixture technology has made it possible through adding around 1% of GHPC-S as another additive to keep the qualities of blended cement such as early strength or durability. Although the admixture has been developed in China, it is the result of cooperative research works with several professors and experts including Japanese professors. The officials of Building Material Industry Administration Office of Shanxi Province gave high estimation to the admixture technology at the Site-visit. A third party, Civil Architectural Society of Shanxi Province issued a certificate assuring the high performance of the product using the admixture. The validation team considers the blended cement technology to be most advanced and reliable in spite of no technology transfer from Annex 1 parties, as well as environmentally sound.
4. In establishing the baseline emissions, adequate data on cement types in the Shanxi Province market provided by Building Material Industry Administration Office of Shanxi Province. The validation team visited the office during the Site-visit

and obtained several documents. As the result of checking the data in the PDD, these data were found to be in accordance with those supplied by the office at that time. The validation team considers the process deciding the baseline emissions appropriate, in accordance with the methodology, ACM0005.

5. In relation to the additionality the starting date of the project activity has been revised two times. The original PDD set the starting date on 4 September 2007 when the stakeholders' meeting was successfully held in the county house and the favourable result for the PPs was obtained. Considering the definition of the term in "Glossary of CDM terms" the starting date was changed to 10 September 2007 when the board meeting of Shanxi Guashan Cement decided formally to execute the project as CDM. However, after the decision (Para. 67) of CDM-EB-41 it is revised to 20 November 2007 when the contract on the long-term purchase of the admixture was signed, taking into account "the starting date shall be considered to be the date on which the PP has committed to expenditures related to the implementation". The validation team acknowledges the date as the earliest date on which implementation of the project activity regarding the commitment to a significant purchase began.
6. The PPs were aware of the CDM through a local CDM seminar prior to the project activity implementation, and judged that the benefits of the CDM were a decisive factor in the determination to proceed with the project through the deliberation on the economic analysis in the feasibility study report (Initial Version). After going through the discussions with the CDM consulting company and local stakeholders consultation, the PPs made the decision to proceed with the project as a CDM project activity. After that, the feasibility study report (Detailed Version) was prepared for applying for the approval of DRC of Jiaocheng County. To secure CDM status for the project, the PPs concluded the Emissions Reduction Purchase Agreement in parallel with the validation of the project activity.

The processes and evidences regarding the prior consideration mentioned above are shown in timeline (Table 11 in the PDD). The main stream is as given below:

- 02 March 2007, Participation in the local CDM seminar;
- June 2007, Preparation of "Feasibility Study Report (Initial Version)";
- 20 July 2007, Conclusion of agreement between Kyushu Electric Power and Mizuho Information & Research Institute with regard to blending cement project under the CDM;
- 04 September 2007, Holding local stakeholders meeting;
- 10 September 2007, Decision of the Board Meeting of Shanxi Guashan Cement;
- 20 November 2007, Conclusion of the long-term purchase agreement for the admixture between Shanxi Guashan Cement and Luliang Guangsha Material;
- 10 December 2007, Conclusion of the contract with DOE for validation service; and
- 28 December 2008, Conclusion of the Emissions Reduction Purchase Agreements.

6 CONCLUSION

1. The validation team confirmed that the project activity meets all relevant UNFCCC and Host Party criteria. It is stated in the PDD that the proposed CDM project aims to contribute to the sustainable development in China due to several reasons, and this was confirmed through interviews with key persons of the local government. The total estimate of GHGs emission reduction by the project activity will amount to 708,455 t-CO₂e/10 years. The fixed value will be determined by the ex-post assessment using the monitoring plan defined in the PDD.
2. Through the Certification Committee deliberation, JQA determined the project activity to be valid as a CDM project activity.

7 REFERENCES

Category 1 Documents:

- 1 PDD (Version 1.0) and PDD (Version 2.2)
- 2 Letter of Approval issued by National Development and Reform Commission of the People's Republic of China (30 July 2008)
- 3 Letter of Approval issued by Japanese DNA (25 April 2008)
- 4 Statement on the Modalities for Communication with the Executive Board and the UNFCCC Secretariat (19 June 2008)
- 5 "Environmental Impacts Registration Report on Shanxi Guashan Cement" issued on 21 January 2008
- 6 Approval Letter [2008] No.22 for "Environmental Impacts Registration Report on Shanxi Guashan Cement" issued by Environmental Protection Department, Jiaocheng County on 26 February 2008

Category 2 Documents:

- 7 Emission Factor of the North China Electricity Grid,
<http://cdm.ccchina.gov.cn/web/NewsInfo.asp?NewsId=2184>
- 8 Letter [2008] No.23 for the explanation of the production and use situation of blast furnace slag to be used by Shanxi Guashan Cement issued by Environmental Protection Department, Jiaocheng County on 26 February 2008
- 9 Inspection Certificate for meeting the emission standards of air pollutants issued by Environmental Protection Department, Luliang City on 19 September 2003
- 10 Inspection Report [2007] No.192 issued by Environmental Monitoring Station, Luliang City on 27 August 2007
- 11 Permission on the annual amount of air pollutant emissions issued by Environmental Protection Department, Luliang City on 8 January 2008
- 12 Questionnaires filled in by local residents living in the area around Shanxi Guashan Cement
- 13 Introduction of GHPC Technology of Luliang Guangsha Material
- 14 Admixture purchase agreement between Luliang Guangsha Material and Shanxi Guashan Cement, 20 November 2007
- 15 Blast furnace slag purchase agreements between Shanxi Guashan Cement and four blast furnace slag suppliers, January/February 2008
- 16 ISO 9001:2000 Standard Certificate issued on 28 September 2006
- 17 ISO 14001:2004 Standard Certificate issued on 28 September 2006
- 18 Presentation materials for Introduction of GHPC Technology of Luliang Guangsha Material, October 2007, Shinichi Numata
- 19 Summary report of GHPC building materials project plan by Luliang Guangsha Material
- 20 Behavior of Blast Furnace Fume (HSC II) Concrete Incorporated with Large Amount of Ground Blast Furnace Slag against Durability, etc., April 2006, Shinichi Numata
- 21 Collection of the Academic Papers on Blast Furnace Fume Concrete, August 2005
- 22 Cement production process and monitoring points for the production line I of Shanxi Guashan Cement

- 23 List of monitoring items in the cement production process of Shanxi Guashan Cement
- 24 Shanxi Province circulation-type economy development plan [No.51, 2006] issued by Shanxi Province People's Government on 23 December 2006
- 25 List of academic reports relating to GHPC and their cover pages
- 26 Certificate of the GHPC's quality issued by Taiyuan University of Technology on 14 March 2008
- 27 Statistic of the cement productions and consumptions in Shanxi Province issued by Shanxi Province Building Material Industry Administration Office on 14 March 2008
- 28 Statistic of the cement productions by company in Shanxi Province issued by Shanxi Province Building Material Industry Administration Office on 14 March 2008
- 29 Letter for explanation that export by Shanxi Guashan Cement is unapproved issued by Development and Reform Commission, Jiaocheng County on 21 April 2008
- 30 Letter for explanation that official development assistant (ODA) has never been used on the project activity issued by Development and Reform Commission, Jiaocheng County on 21 April 2008
- 31 Feasibility study report (Detailed Version) of the project activity issued by an certified consulting company in January 2008
- 32 Decision of the Board Meeting of Shanxi Guashan Cement held on 10th September 2007
- 33 Chart of structure for the CDM implementation in Shanxi Guashan Cement
- 34 Educational program on the CDM project activity in Shanxi Guashan Cement
- 35 Manual for the chemistry laboratory of cement industry
- 36 Specification of the vehicles used for the transportation of slag
- 37 List of thirty-two stakeholders whose comments were invited by PP
- 38 Maps showing the villages near the project site
- 39 Video of the stakeholders meeting held on 4th September 2007
- 40 Agenda and participants list of the stakeholders meeting held on 4th September 2007
- 41 GB 175-2007 (national standard for common portland cement in China)
- 42 List of national standards for chemical experiments relating to cement in China, and their cover pages and summaries
- 43 Measurement record of the scale for raw materials showing the GB applied
- 44 Approval Letter [2008] No.3 for the project activity issued by Development and Reform Commission, Jiaocheng County on 21 January 2008
- 45 Maps showing the transportation distance between Luliang Guangsha Material and a blast furnace slag supplier.
- 46 Certificate of the measurement of cement products in Shanxi Guashan Cement issued by Shanxi quality technology supervising bureau on 10 March 2003
- 47 Certificate of second grade of the measuring and examining assurance ability in Shanxi Guashan Cement issued by Shanxi quality technology supervising bureau on 8 October 2003
- 48 Certificate of the inspection and calibration of truck scale in Shanxi Guashan Cement issued by Shanxi quality technology supervising bureau on 26 April 2007
- 49 Document showing the organization for the measuring and relevant management in Shanxi Guashan Cement

- 50 Operation manual on the quality control in Shanxi Guashan Cement
- 51 List of the measuring instruments equipped in the project site showing the calibration periods and the persons responsible for each instrument's calibration
- 52 Stipulation for the quality control of cement industry issued by National Economy and Trade Commission on 1 April 2002
- 53 Inspection records of the scales of belt conveyors in Shanxi Guashan Cement
- 54 Production records of Shanxi Guashan Cement plant (2003 - 2006)
- 55 Report of the internal investigation on CDM project implemented issued by Shanxi Guashan Cement on 1 June 2007
- 56 Certificate of second grade award of scientific technology progress promotion issued by Shanxi scientific technology progress promotion committee in April 2001
- 57 Certificate of third grade award of scientific technology progress issued by Shanxi scientific technology committee in September 1995
- 58 Handouts about the project activity delivered to the stakeholders
- 59 Timeline showing the actions by the project participants before the starting date of the project activity and the relevant documents.
- 60 Certificate of the technology (GHPC-S, blending technique of GHPC-S, etc) to be employed by the project activity issued by the Ad Hoc Committee on Cement Additives, Civil Architectural Society of Shanxi Province on 29 May 2008
- 61 Coarse grinder purchase agreement between Shanxi Guashan Cement and supplier of the coarse grinder installed by the project activity, 1 December 2007
- 62 Feasibility study report (Initial Version) of the project activity issued by an certified consulting company in June 2007
- 63 Consulting service agreement with regard to the blending cement project under the CDM between Kyushu Electric Power Co., Inc. and Mizuho Information & Research Institute Co., Inc. (MHIR), 20 July 2007
- 64 Emissions Reduction Purchase Agreement (ERPA) between Kyushu Electric Power Co., Inc. and Shanxi Guashan Cement, 10 December 2008
- 65 Introduction to cement and concrete, Japan Cement Association
- 66 The Slag Sector in the Steel Industry, Nippon Slag Association
- 67 Information of Kawasaki Plant, DC Co., Ltd.

8 LIST OF INTERVIEWED PERSONS

1	Mr. Zhang XiaoWen	Deputy County Chief, Jiaocheng County
2	Mr. Zhang ZhiCun	General Director, Development and Reform Commission, Jiaocheng County
3	Mr. Zhang NaiZhong	General Director, Environmental Protection Department, Jiaocheng County
4	Mr. Ren JionFeng	Chief Engineer, Environmental Protection Department, Luliang City
5	Mr. Yue YongQiang	Deputy General Director, Environmental Protection Department, Jiaocheng County
6	Mr. Wang ChaoYang	Chief economist, Development and Reform Commission, Jiaocheng County
7	Mr. Yan GuangQing	General Manager, Luliang Guangsha Material
8	Ms. Zhang JuQiang	Director, Luliang Guangsha Material
9	Mr. Niu DashEng	Director, Luliang Guangsha Material
10	Mr. Hou JiQiang	Supervisor, Luliang Guangsha Material
11	Mr. Yan GuangPing	General Manager, Xing Long Casting Co., Ltd.
12	Mr. Yan FanWei	Deputy General Manager, Xing Long Casting Co., Ltd.
13	Mr. Zhang XueGong	Manager of Operation, Xing Long Casting Co., Ltd.
14	Mr. Lu EnYuan	General Manager, Shanxi Guashan Cement
15	Mr. Wang MengGang	Chief Engineer, Shanxi Guashan Cement
16	Mr. Lu Tao	Manager Assistant, Shanxi Guashan Cement
17	Mr. Dong ChaoXu	Head of Management Department, Shanxi Province Building Material Industry Administration Office
18	Mr. Gu JunZhong	Deputy Director, Management Department, Shanxi Province Building Material Industry Administration Office
19	Ms. Ma XiaoNun	Senior Engineer, Shanxi Province Building Science Research Institute
20	Ms. Ma YunFong	Professor, Taiyuan University of Technology
21	Mr. Cang WeiMing	Farmer, ZhaoLin Village
22	Mr. Wei XinLian	Farmer, ZhaoLin Village
23	Ms. Wu XinYing	Farmer, Tian Village
24	Mr. Li JianMing	Farmer, Tian Village
25	Mr. Hanemoto Takahiro	President, DC Co., Ltd.
26	Mr. Koibuchi Kiyoshi	General Manager, Technical Information Department, DC Co., Ltd.

CDM VALIDATION CHECKLIST

Mizuho Information & Research Institute Co., Inc.

The Blended Cement project utilizing the additives
to decrease the clinker content in Shanxi Guashan Cement

Project No. JQA-C0077
(No.1812000088)

Date: 15 August 2008



Japan Quality Assurance Organization

Table 1 Comprehensive Checklist for CDM Project Activities

Requirements	Reference	Conclusion	Evidence
1. The purpose of the CDM	Kyoto Protocol Article 12.2		
1.1. The project activity shall assist the host country in achieving sustainable development		OK	LoA issued by DNA of China on 30 July 2008.
1.2. The project activity shall assist the host country in contributing to the ultimate objective of the Convention.		OK	ditto
1.3. The project activity shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3.		OK	LoA issued by DNA of Japan on 25 April 2008.
2. Emission reductions resulting from the project activity shall be certified by DOE on the basis of:	Kyoto Protocol Article 12.5		
2.1. Voluntary participation approved by each Party involved (and Authorization of a private and/or public entity)	(a)	OK	LoAs issued by DNAs of China and Japan.
2.2. Real, measurable and long-term benefits related to the mitigation of climate change	(b)	OK	
2.3. Reductions in emissions that are additional to any that would occur in absence of the project activity	(c)	OK	
3. CDM Modalities and Procedures (Decision 17/CP. 7)	Paragraph 37		
3.1. Participation requirements	(a)	OK	
3.1.1. Participation in a CDM project activity is voluntary.	Paragraph 28	OK	
3.2. The authorization of a private and/or public entity, to participate in a CDM project activity referred to in paragraph 33 of the modalities and procedures, is provided in writing by the DNA of the Party pursuant to the laws of which the private and/or public entity is constituted as a legal entity. The authorization: ➤ May be included in the written approval	CDM Guideline Version 06 (28 July 2006)	OK	LoAs issued by DNAs of China and Japan.

referred to in paragraph 1.1 above ➤ Can pertain to a specific project activity or be of general character.			
3.2.1. Parties participated in the CDM shall designate a national authority for the CDM.	Paragraph 29	OK	http://cdm.unfccc.int/DNA
3.2.2. A host country may participate in a CDM project activity if it is a Party to the Kyoto Protocol.	Paragraph 30	OK	http://unfccc.int/resource/kpstats.pdf
3.3. Comments by local stakeholders	37 (b)	OK	Table 2 Section E
3.4. Analysis of the environmental impacts of the project activity	37 (c)	OK	Table 2 Section D
3.5. Additionality	37 (d)	OK	Table 2 Section B
3.6. Use of the approved baseline and monitoring methodologies	37 (e)	OK	Table 2 Section B (ACM0005/Version 04)
3.7. Provisions for monitoring, verification and reporting	37 (f)	OK	Table 2 Section B
3.8. Other requirements including relevant decisions by the COP/MOP and the executive board	37 (g)	OK	Table 2 Section A, C
3.9. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for 30 days, and the project design document and comments have been made publicly available.	40 (c)	OK	No comment was received. Start date: 27/12/2007 Close date: 25/1/2008
4. PDD Format	CDM Guidelines (Version 06)		
4.1. If project participants wish to submit a project activity for validation and registration, they shall submit a fully completed CDM-PDD.	PART I Paragraph 3	OK	PDD Version 03.1
4.2. The CDM-PDD shall be completed and submitted in English language to the Executive Board.	PART I Paragraph 12	OK	ditto
4.3. The CDM-PDD template shall not be altered, that is, shall be completed using the same font without modifying its format, font, headings or logo.	PART I Paragraph 13	OK	ditto
4.4. Tables and their columns shall not be modified or deleted.	PART I	OK	ditto

Rows may be added, as needed.		Paragraph 14		
4.5.	The CDM-PDD shall include in A.1 the version number and the date of the document.	PART I Paragraph 15	OK	Version 2.0, 14/08/2008
4.6.	If section of the PDD is not applicable, it shall be explicitly stated that section is left blank on purpose.	PART I Paragraph 16	OK	-
4.7.	The CDM-PDD is not applicable to A/R CDM project activity.	PART I Paragraph 17	OK	Not A/R project activity
5. Modalities of communication		CDM Guideline (Version 06)		
5.1	The modalities of communication between project participants and the Executive Board are indicated at the time of registration by submitting a statement signed by all project participants.		OK	Statement on the Modalities of Communication with the CDM Executive Board and the UNFCCC Secretariat, on 19 June 2008.

Table 2 PDD Requirements and Resolution of CARs / CLs

Section	Requirements	MoV	Comments	Draft Conc.	Final Conc.
Section A	General description of the project activity				
A.1	Title of the project activity				
	Title of the project activity	DR		OK	
	Version number and date of the doc.	DR		OK	
A.2	Description of the project activity				
	The purpose of the project activity	DR	<p>The purpose of the project activity is not clearly described at the beginning of project summary.</p> <p><i>It was clearly described.</i></p>	CL	OK
	What type of technology is being employed? What exact measures are undertaken?	DR	<p>The blended cement technology is being employed in the project activity. However, the decreased clinker content, approx. 60% is different from 64% in B.5. and 54.7% in B.4.</p> <p><i>The decreased clinker content was unified as 64%.</i></p>	CL	OK
		SV	<p>The background situation in Shanxi Province relating to the project activity is not clear.</p> <p><i>It was clearly described under the subtitle "Background".</i></p>	CL	OK
		DR	<p>It is not clear where 1 tCO₂/t-clinker derives from, whereas the default value of IPCC is 0.51.</p> <p><i>The description was deleted.</i></p>	CL	OK

		DR	It is not clear whether any cooperation between the PP and Luliang Guangsha Material has been established. <i>It was described that the Purchase Agreement was exchanged between both companies.</i>	CL	OK
		DR	The type of the cement to be adopted in the project is not shown, although P.S is referred to later. <i>The cement type was clearly described as slag cement with blast furnace slag (P.S).</i>	CL	OK
		DR	It is not clear that such decreased clinker contents keep the qualities necessary for the users' needs.	CL	
		SV	Some evidence showing the figurers, 35.0-42.5% is to be confirmed.	CL	
		DR2	"The technology to be employed in this project is verified by the third party" is ambiguous, because the professor of Taiyuan University of Technology is a collaborator.	CL	
		DR2	Some certificate showing that the newly developed GHPC-S has enough compressive strength in 3 days is necessary.	CL	

		DR2	<p><i>The above mentioned questions of the qualities of the product/technology have been closed through confirming the certificate for the product by a third party, the Ad Hoc Committee on Cement Additives of Civil Architectural Society of Shanxi Province.</i></p> <p>The present situation of BC cement productions and the production capacity of the CDM project in the company are not described.</p> <p><i>The productions in 2007, 2008 and 2009 were described as 360, 400 and 600 kt/y, respectively.</i></p>	CL	OK
	The view of the PPs on Contribution to SD	DR	<p>It is not clear whether there is no final disposal issue in relating to SD.</p> <p><i>The fact was described that there is the final disposal issue relating to SD in the region.</i></p>	CL	OK
A.3	Project participants				
	List of PPs and Parties involved	DR		OK	
	Provide contact information in Annex 1	DR		OK	
A.4	Technical description of the project activity				
A.4.1	Location of the project activity	DR		OK	
A.4.1.1	Host Party	DR		OK	
A.4.1.2	Region/State/Province, etc.	DR		OK	
A.4.1.3	City/Town/Community, etc.	DR	<p>The geographical relation between Luliang and Tan Village is not clear.</p> <p><i>The expression of A.4.1.3. was revised.</i></p>	CL	OK

A.4.1.4	Detail of physical location				
	Fill in the field and do not exceed one page.	DR	The site of Luliang Guangsha Material is not shown. <i>The company was confirmed to be located in Jiaocheng County, about 5 km apart from the project site during SV.</i>	CL	OK
		DR2	Any English caption is not shown in the newly added figure. <i>English captions were added in the figure.</i>	CL	OK
A.4.2	Category(ies) of the project activity				
	Specify the category into which this project activity falls. If no suitable category can be identified, suggest a new category descriptor and its definition.	DR		OK	
A.4.3	Technology to be employed by the project activity				
	What kinds of technologies are employed? How environmentally safe and sound technology, and know-how to be used, is transferred to the host Party.	DR	The processes and know-how to be used, and how environmentally safe and sound technology are deficient in the description. It is not clear how the technology to be adopted is advanced and established not only in China, but also in the world. <i>The description that the technology had been developed and cooperated with several domestic and Japanese professors was added. Through introducing coarse grinder before the current ball-mill stage the particle size is</i>	CAR1	OK

			<i>appropriately arranged for the project activity, and the strength and durability are ensured.</i>		
		SV	It is not clearly described showing some academic reports that the advanced technology has been developed with the cooperative works of not only Chinese distinguished scholar, but also Japanese professors. <i>Several academic reports were shown with the names of authors and journals in footnotes.</i>	CL	OK
		DR	It is not clear what kind of blast furnace slag is utilized in the project activity. <i>It was clearly described that 100% water-granulated slag will be used.</i>	CL	OK
		SV	The fact is not described that a pre-crusher is to be newly settled prior to the ball mill for roughly crushing the slag. <i>It was clearly described.</i>	CL	OK
		SV	Inspection Center for Building Material Quality of Shanxi Province inspects the cement products and also conducts the issuance of certificates assuring the compliance of the products to GB. <i>The descriptions on the Inspection Center were added.</i>	CL	OK

		DR	The certificate of ISO14001 is to be confirmed at SV. <i>The certificate was confirmed at SV and described in B.7.2.</i>	CL	OK
		DR2	The publishing companies of the newly added six reports demonstrating the outstanding properties of the product are absent. <i>These were added in footnotes.</i>	CL	OK
A.4.4	Estimated amount of emission reductions				
	Indicate the chosen crediting period	DR		OK	
	Provide the total estimation of emission reductions as well as annual estimates. Information on the emission reduction shall be indicated using the format.	DR	The meaning of “remaining uncertainty of baseline scenario at the beginning of the second renewable crediting period” is not clear. <i>It was deleted.</i>	CL	OK
A.4.5	Public funding of the SS project activity				
	In case public funding from Annex 1 Parties, provide information in Annex 2. Such funding does not result in a diversion of ODA.	DR		OK	
Section B	Application of a baseline and monitoring methodology				
B.1	Title and reference of the approved baseline and monitoring methodology applied				
	Refer to the UNFCCC CDM web site - approved methodology(ies) and	DR		OK	

	version(s) - tools and their versions				
B.2	Justification of the choice of the methodology and why it is applicable to the project activity				
	Justify the choice of methodology by showing that the proposed project activity meets each of the applicability conditions. (Applicability condition)	DR	The prerequisite prescribed before the three applicability conditions in the methodology is not introduced, and not justified. <i>It was introduced and justified due to several reasons including the current status that there is little importing/exporting cement from/to the other provinces or the other countries.</i>	CAR2	OK
		DR	It is not clear how another additive, fly ash is supplied to the project activity. <i>It was clearly described that fly ash is not utilized in the project activity.</i>	CL	OK
	Explain documentation has been used and provide the references to the document or include the documentation in Annex 3.	DR	The numbers and the titles of two tables are not given. This CL is applicable to other tables hereinafter. The years of the data in the tables are not shown. <i>The numbers and the titles were given to two tables and others. The year, 2007 was also shown.</i>	CL	OK
		SV	The fact is not described that the slag purchase agreements have been exchanged between Shanxi Guashan Cement and four iron and steel companies.	CL	

		SV	<p><i>It was clearly described.</i></p> <p>The fact obtained through the interview with the chief of Shanxi Province Building Material Office that the cement companies which export their products to foreign countries need to obtain an approval from the governmental office is not referred to.</p>	CL	OK
		DR2	<p><i>It was clearly described showing the document which bans to export the product.</i></p> <p>The figures of “Supply (kt/year)” in Table 3 are different from those listed in the contracts with slag suppliers.</p> <p><i>These figures were revised in accordance with the contracts.</i></p>	CL	OK
B.3	Description of the sources and gases included in the project boundary				

	Describe which emission sources and gases are included in the project boundary for the purpose of calculation project emissions and baseline emissions, using the table. In cases where the methodology allows project participants to choose whether a source or gas is to be included in the project boundary, explain and, where necessary, justify the choice.	DR	Leakage due to transport is absent from the table. <i>It was added not only in Table 5, but also in the leakage emission calculation of Step 4 of B.6.1.</i>	CAR3	OK
		DR	It is not clear whether there is any on-site power generation plant within the boundary. <i>It was confirmed through SV that there is no on-site power generation plant. The fact was reflected on the application of the methodology.</i>	CL	OK
		DR	The project boundary including all the emission sources may be illustrated. <i>A flow chart of the project activity was illustrated.</i>	CL	OK
	Describe which emission sources and gases are included in the project boundary for the purpose of calculation project emissions and baseline emissions, using the table. In cases where the methodology allows project participants to choose whether a source or gas is to be included in the project boundary, explain and, where necessary, justify the choice.	DR2	GHG emission due to the introduction of admixture is not referred. <i>Electricity from the grid due to the introduction of coarse grinder and mixing raw materials of admixture GHPC-S were added in Table 5. These were also calculated as leakage in Step 4 of B.6.1.</i>	CAR4	OK
B.4	Description of how the baseline scenario is identified and description of the identified baseline scenario.				

	<p>Explain how the most plausible baseline scenario is identified. Where the procedure involves several steps, describe how each step is applied and transparently document the outcome of each step.</p> <p>Explain and justify key assumptions and rationales.</p> <p>Provide relevant documentation or references. Illustrate in a transparent manner all data used to determine the baseline scenario (variables, parameters, data sources etc.), preferably in a table form.</p> <p>Provide a transparent and detailed description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed project activity, taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector.</p>	<p>DR</p> <p>DR</p>	<p>It is not clear what titles the National Standards, GB1344 and GB12958 are. GB175 which will consolidate both the standards in June 2008 is not referred to.</p> <p><i>The titles were added. The consolidated standard, GB175 was referred to.</i></p> <p>It is not clear where these figures of (i) - (iii) were derived from.</p> <p><i>The calculating processes of three figures were shown.</i></p>	<p>CL</p> <p>CL</p>	<p>OK</p> <p>OK</p>
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)				
	Explanation of how and why this project activity is additional and therefore not the baseline scenario in	DR	The description of the first alternative in Sub-step 1a is not enough.	CL	

	<p>accordance with the selected baseline methodology. Where the procedure involves several steps, describe how each step is applied and transparently document the outcome of each step. Where the barriers are involved in demonstrating additionality, only select the (most) relevant barriers. Explain and justify key assumptions and rationales, including contractual requirements, mandatory regulations, or other requirements.</p> <p>Provide relevant documentation or references.</p> <p>Illustrate in a transparent manner all data used to assess the additionality of the project activity (variables, parameters, data sources etc.), preferably in a table form.</p>				
		DR	<p><i>It was revised referring to the methodology.</i></p> <p>Is the source of the table of “Raw materials for P.S. cement” derived from GB? The table is different from the table in p10.</p>	CL	OK
		DR	<p><i>The table was revised based on GB.</i></p> <p>It is not justified that the National Standard is a mandatory law and regulation, whereas the standards are essentially voluntary. There is a description in p17 “the cement should respect the national Standards”.</p>	CL	OK
		DR	<p><i>The fact was described that there is no national/provincial regulation to decrease clinker content.</i></p> <p>It is not clear whether “P.S 32.5” in the table (p14) is the product number of the company or the expression of the standard.</p>	CL	OK
		DR	<p><i>Note for “32.5” was added below Table 12.</i></p> <p>It is not clear what the sources of the tables (p14 and p15) are, and where these figures are derived from.</p>	CL	OK
		DR	<p><i>FSR was explained as data sources under the tables.</i></p> <p>It is not clear why the figures of electricity for “Use in the Baseline Scenario” and “Use in the</p>	CL	OK

			Project Scenario” in the table are the same, whereas the processes are different.		
			<i>The reason was explained in the footnote.</i>		OK
		SV	The price of the admixture in the contract exchanged between Luliang Guansha Material and Shanxi Guashan Cement is different from that shown in the Financial Calculation in the PDD.	CL	
			<i>The price in the PDD was revised in accordance with the contract.</i>		OK
		DR	It is not clear how the blend cement technology has been advanced in foreign countries, and how the technology has been introduced to China from advanced countries.	CL	
			<i>The descriptions that the technology had been domestically developed and concrete products had been exported to Japan were added.</i>		OK
		DR	There is no description on how the PP is going to conquer the technical barrier through introducing the Luliang's technology. It does not seem that the PP will conquer the barrier, as far as they produce the blend cement prescribed by the GB.	CL	
			<i>The descriptions were added, focusing on maintaining the quality of the blended cement through the valid blending ration and</i>		OK

		DR	<i>appropriate particle size distribution of cement.</i>	CL	
		DR	Regarding Step 4, it is described that there is still a general perception that the quality of the blended cement is inferior. However, it is not clear how and through what kind of technology the perception would be upset.	CL	OK
		DR2	<i>ditto.</i> “Provide evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity”, because the starting date of the project activity is before the date of validation. <i>The reason of deciding the starting date of the project activity on 10 September 2007 was described with the evidence on the decision of the Board Meeting.</i>	CL	OK
B.6	Emission reductions				
B.6.1.	Explanation of methodological choices:				
	Explain how the procedures, in the approved methodology to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity. Clearly state which equations will be used in calculating emission reductions.	DR	It is not clear whether the self generated electricity is present, whereas the forth term is in Eq.(1.1). <i>The forth term was deleted because the self generated electricity is not present.</i>	CL	OK
		DR	If the self power plant is absent, Eq.(1.1.4), Eq.(1.2.4), Eq.(2.1.4) and Eq.(2.2.4) are not necessary.	CL	

		DR	<i>ditto.</i> The expressions for CLNK and BC are absent in Eq.(1.1.4) and Eq.(1.2.2).	CL	OK
		DR	<i>ditto.</i> The discussions on estimating $PE_{BC,y}$ in line with the methodology are absent.	CL	OK
			<i>The discussions were described in line with the methodology.</i>		OK
		DR	There is no reference to the emission factor for electricity issued on 9 August 2007 by the Chinese DNA, through which the emission factor for electricity required for the project activity can be calculated. The process of calculating the emission factor for electricity is not shown.	CAR5	
			<i>The reference was introduced, and the process was shown.</i>		OK
B.6.2	Data and parameters that are available at validation				
	This section shall include a compilation of information on the data and parameters that are not monitored throughout the crediting period but that are determined only once and thus remains fixed throughout the crediting period AND	SV	The fact is not referred to that CaO in clinker, MgO in raw material, etc. are daily analyzed based on GB at the chemical laboratory of the company. <i>The fact was described that CaO, MgO and others in the clinker are analyzed every eight</i>	CL	OK

	that are available when validation is undertaken.		<i>hours daily, that CaO, MgO and others in the raw materials are analyzed every time the raw material is brought in the plant and that these analyses are conducted based on GB.</i>		
	Data that becomes available only after validation of the project activity (e.g. measurements after the implementation of the project activity) should not need to be included here but in the table in section B.7.1. This may includes data that is measured or sampled, and data that is collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature, etc.). Data that is calculated with equations provided in the methodology or default values specified in the methodology should not be included in the compilation. Provide for each data or parameter the chosen value or, where relevant, the qualitative information, using the table provided below. Particularly: - Provide the actual value applied. Where time series of data is used, where several measurements are undertaken or where surveys have been conducted, provide detailed information in Annex 3. - Explain and justify the choice for the source of data. Provide clear and transparent	SV	It is not clear what year “Plant record” in the tables was obtained. <i>It was clearly described that the “Plant record” was based on the average of actual operation data during the three years (2004-2006).</i>	CL	OK
		DR	“Quantity of clinker raw material” should be expressed as a symbol or term shown in the equation. <i>It was revised as RM_{BSL}.</i>	CL	OK
		DR	It is not clear that two kinds of coal are used for clinker production and where the values are introduced. <i>It was added that one is used as a raw material for clinker production and the other is as fuel of desiccation for raw materials, and that the values are for “other bituminous coal” of IPCC Report.</i>	CL	OK
		DR2	The figures of InCaO and OutCaO are different from those in B.6.3. Those figures of historical data are to be investigated further. <i>These were revised.</i>	CL	OK

	<p>references or additional documentation in Annex 3.</p> <ul style="list-style-type: none"> - Where values have been measured, include a description of the measurement methods and procedures (e.g. which standards have been used), indicate the responsible person / entity having undertaken the measurement, the date of measurement(s) and the measurement results. - More detailed information can be provided in Annex 3. 	<p>DR2</p>	<p>The figures of $BELE_{grid_ADD}$, $B_{Blend,y}$, $A_{Blend,y}$ are different from those in B.6.3.</p> <p><i>These were revised.</i></p>	CL	OK
		<p>DR2</p>	<p>BC_{BSL} is absent in B.6.2.</p> <p><i>It was added.</i></p>	CL	OK
B.6.3.	Ex-ante calculation of emission reductions				
	<p>Provide a transparent ex-ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology.</p> <p>Use estimations for parameters that are not available when validation is undertaken or that are monitored during the crediting period.</p> <p>Document how each equation is applied, in a manner that enables the reader to reproduce the calculation.</p> <p>Where relevant, provide additional background information and/or data</p>	<p>DR</p>	<p>A transparent ex-ante calculation is to be confirmed through obtaining the Excel sheet.</p> <p><i>It was confirmed after obtaining the Excel sheet.</i></p>	CL	OK
		<p>DR2</p>	<p>The emission factors of the North China Grid utilized in the calculation of the emission reduction should be reviewed because "Tool" was issued by EB35 after Chinese DNA published the emission factors in August 2007.</p> <p><i>The emission factors were recalculated by the PP and the ex-ante estimation of emission reductions was revised.</i></p>	CAR5'	OK

	in Annex 3, including relevant electronic files (i.e. spreadsheets).				
B.6.4.	Summary of the ex-ante estimation of emission reductions				
	Summarize the results of the ex-ante estimation of emission reductions for all years of the crediting period, using the table	DR	The format of the table is not in line with the "GUIDELINE FOR COMPLETING CDM-PDD". <i>It was revised.</i>	CL	OK
B.7.	Application of the monitoring methodology and description of the monitoring plan				
B.7.1	Data and parameters monitored				
	<p>This section shall include specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity. Data that is determined only once for the crediting period but that becomes available only after validation of the project activity (e.g. measurements after the implementation of the project activity) should be included here. Provide for each parameter the following information, using the table provided:</p> <ul style="list-style-type: none"> - The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). - Where several sources may be 	DR	<p>"Quantity of clinker raw material" should be expressed as a symbol or term used in the equation.</p> <p><i>It was expressed as RM_y.</i></p>	CL	OK
		DR	<p>All the figurers listed in "Value applied" should be reviewed, and shown as to the sources.</p> <p><i>These were reviewed and revised.</i></p>	CL	OK
		SV	<p>The fact is not referred to that the electricity consumptions at the project site are daily monitored by the power meters for each facility at the energy center.</p> <p><i>The fact was described for monitoring $PELE_{grid\ CLNK,y}$, $PELE_{grid\ BC,y}$ and $PELE_{grid\ ADD,y}$.</i></p>	CL	OK
		DR2	Any national or international standards of	CL	

	<p>used, explain and justify which data sources should be preferred.</p> <ul style="list-style-type: none"> - Where data or parameters are supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied, which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied, what is the accuracy of the measurement method, who is the responsible person / entity that should undertake the measurements and what is the measurement interval. - A description of the QA/QC procedures (if any) that should be applied. - Where relevant: any further comment. <p>Provide any relevant further background documentation in Annex 4.</p>	DR2	<p>measuring methods for RM_y, $CLNK_y$, $FF_{i,y}$ and others are not described.</p> <p><i>National Standards such as GB were described.</i></p> <p>The reason why the figure, 600kt of BC_y is larger than the figure, 400kt obtained at SV.</p> <p><i>The reason was clearly described.</i></p>	CL	<p>OK</p> <p>OK</p>
B.7.2.	Description of the monitoring plan				
	Provide a detailed description of the	DR	The monitoring structure for implementing the	CL	

	<p>monitoring plan. Describe the operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity.</p> <p>Clearly indicate the responsibilities for and institutional arrangements for data collection and archiving. The monitoring plan should reflect good monitoring practice appropriate to the type of project activity. Provide any relevant further background information in Annex 4.</p>	<p>DR</p> <p>SV</p> <p>DR2</p>	<p>project might be illustrated.</p> <p><i>CDM project implementation team was illustrated.</i></p> <p>The education and training for personnel for monitoring is not described, whereas the necessity is described in P17.</p> <p><i>The description was added for "Education on CDM".</i></p> <p>The fact is not referred to that the management system of ISO9001 and ISO14001 has been already established at the company and the structure and responsibility for monitoring has been clarified in the system.</p> <p><i>The fact was referred to.</i></p> <p>The monitoring for confirming the fulfillment of applicability conditions is not referred, although the necessity is described in B.2.</p> <p><i>It was described in detail.</i></p>	<p>CL</p> <p>CL</p> <p>CL</p>	<p>OK</p> <p>OK</p> <p>OK</p> <p>OK</p>
B.8.	Date of completion of the application of the baseline and monitoring methodology and the name of responsible person(s)/entity(ies):				
	Provide date of completion of the application of the methodology to the	DR		OK	

	State whether the project will use a renewable or fixed crediting period and complete C.2.1 or C.2.2 accordingly.	DR	It is not stated whether the project will use a renewable or fixed crediting period. <i>It was stated.</i>	CL	OK
		DR2	01/07/2008 is not possible at the moment. <i>The date was changed to 01/10/2008 or after the date of registration (whichever is later).</i>	CAR6	OK
		DR3	01/10/2008 is not possible at the moment. <i>The date was changed to 01/11/2008 or after the date of registration (whichever is later).</i>	CAR6'	OK
		DR3	01/11/2008 is not appropriate due to the decision of EB41. <i>The date was changed to 01/01/2009 or after the date of registration (whichever is later).</i>	CAR6''	OK
C.2.1	Renewable crediting period				
C.2.1.1	Starting date of the first crediting period				
	State the dates in DD/MM/YYYY	DR		N/A	
C.2.1.2	Length of the first crediting period				
	State the length of the first crediting period in years and months	DR		N/A	
C.2.2	Fixed crediting period				
C.2.2.1	Starting date of the first crediting period				
	State the dates in DD/MM/YYYY	DR		OK	
C.2.2.2	Length				

	State the length in years and months	DR	“and 0 months” is necessary. <i>It was added.</i>	CL	OK
Section D	Environmental impacts				
D.1	Documentation on the analysis of the environmental impacts, including transboundary impacts:	DR	It is not clearly described whether the project activity is applied under the EIA law. <i>It was clearly described that the project is covered under the EIA law.</i>	CL	OK
		SV	The fact is not described that the EIA registry of the project activity was submitted to Jiaocheng County EPD and already approved on 21 January 2008. <i>It was clearly described.</i>	CL	OK
		DR	The meaning of the expression “Although it is not necessary for the project to execute new environmental impact assessment, the local governments approve ...” is not clear. <i>It was deleted.</i>	CL	OK
		DR	It is not clear whether there are any environmental impacts due to flue gas emissions including Hg, Pb, Cd, etc. in the slag, and whether there is any groundwater contamination due to the utilization of the products using slag. <i>The description referring to “Cleaner Production Standard – Cement Industry” was added.</i>	CL	OK

		DR	GB(HJ) "Cleaner Production Standard – Cement Industry" is not referred to. <i>ditto.</i>	CL	OK
	Attach the documentation to the CDM-PDD.				
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.	SV	It is to be confirmed at SV whether the description "EIA is not required for the project activity" is appropriate. <i>The description of the PDD was deleted.</i>	CL	OK
Section E	Stakeholders' comments				
E.1	How comments by local stakeholders have been invited and compiled				
	Describe the process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted. In this regard, project participants shall describe a project activity in a manner which allows the local stakeholders to understand the	DR	It is not clear how the residents at stakeholders meeting were chosen. <i>It was described that they live in neighboring area, and that announcement for the meeting had been made through persons responsible in the three neighboring villages and the questionnaire survey had been conducted by visiting office/home of the neighbors.</i>	CL	OK
		DR	It is not clear what kinds of material were used in the interviews with local residents and how the project activity was explained. It is not clear how the local residents' understanding of the	CL	

	project activity, taking into account confidentiality provisions of the CDM modalities and procedures. The local stakeholder process shall be completed before submitting the proposed project activity to a DOE for validation.	SV	<p>project was confirmed.</p> <p><i>The descriptions were added that PP delivered the handouts about this project activity and supplied some explanations, and that the understanding of this project activity was confirmed by face-to-face interviews. The handouts were confirmed at SV.</i></p> <p>The detailed fact found through interview with the officials of Jiaocheng County EPD and leaders of Shanxi Guashan Cement at SV are not appropriately described.</p> <p><i>The details were described.</i></p>	CL	<p>OK</p> <p>OK</p>
E.2	Summary of the comments received				
	Identify stakeholders that have made comments and provide a summary of these comments	DR	<p>It is not clear how the stakeholders' comments were received.</p> <p><i>It was clearly described that PP collected the questionnaires from all participants of stakeholders' meeting and ten respondents by visiting office/home of the respondents.</i></p>	CL	OK
		SV	<p>Opinions received are to be confirmed at SV.</p> <p><i>The validation team confirmed the all questionnaires of 32 persons. All the answers were supportive to the CDM project, and some of them expected the company to start it as soon as possible. There was no objection at all.</i></p>	CL	OK

E.3	Report on how due account was taken of any comments received				
	Explain how due account have been taken of comments received.	DR		OK	
Annex 1	Contact information on PPs				
	Copy and paste table as needed. Fill for each organization listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail.	DR		OK	
Annex 2	Information regarding public funding				
	Provide information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties	DR		OK	
Annex 3	Baseline information				
	Provide any further background information used in the application of the baseline methodology. This may include tables with time series data, documentation of measurement results and data sources, etc.	SV DR2	It is to be confirmed at SV. <i>The information is appropriately rewritten in the revised PDD.</i>	N/A	OK
Annex 4	Monitoring information				
	Provide any further background	SV	It is to be confirmed at SV.	N/A	

	information used in the application of the monitoring methodology. This may include tables with time series data, additional documentation of measurement equipment, procedures, etc.	DR2	<i>The information is appropriately added in the revised PDD.</i>		OK
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Remarks: MoV: Means of Validation (Desk Review (DR), Site-visit (SV))

CAR : Corrective Action Request

CL : Clarification Request

OK

N/A : Not Applicable at Desk Review

DR2 : refers to CARs and CLs found out through the desk review for the PDD revised after the Site-visit.

DR3 : refers to CARs found out just before applying the request for registration.

Appendix B

Certificate

Dr. Ikuo TAMORI

Grade:	<u>Lead Assessor</u>
Assessor No.:	<u>CDM - LA001</u>
Assigned Date:	<u>2003.08.11</u>

This is to certify that Dr. Ikuo TAMORI is assigned as
CDM Lead Assessor by the Japan Quality Assurance Organization.

Date: February 26, 2007

Japan Quality Assurance Organization

M. Ueda

President Matahiro UEDA

Grant of sectoral scope to CDM/JI assessor

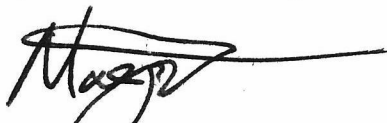
Assessor Name: Dr. Ikuo TAMORI
Grade: Lead Assessor
Assessor No.: CDM-LA001 / JI-LA001

Sectoral Scope	Granted date
1. Energy industries (renewable - / non-renewable sources)	1 Jun. 2003
2. Energy distribution	1 Jun. 2003
3. Energy demand	1 Jun. 2003
4. Manufacturing industries	1 Jun. 2003
5. Chemical industry	1 Jun. 2003
6. Construction	-
7. Transport	1 Jun. 2003
8. Mining/Mineral production	1 Jun. 2003
9. Metal production	1 Jun. 2003
10. Fugitive emissions from fuels (solid, oil and gas)	1 Jun. 2003
11. Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	1 Jun. 2003
12. Solvents use	1 Jun. 2003
13. Waste handling and disposal	1 Jun. 2003
14. Afforestation and reforestation/Land use, land-use change and forestry	-
15. Agriculture	-

This is to certify that Dr. Ikuo TAMORI is granted by the Japan Quality Assurance Organization.

Date: 18/APR/2007

Director of the Global Environment Department
Japan Quality Assurance Organization



Masaki MAEGAITO

Certificate

Mr. Shigenari YAMAMOTO

Grade:	<u>Lead Assessor</u>
Assessor No.:	<u>CDM - LA003</u>
Assigned Date:	<u>2005.07.27</u>

This is to certify that Mr. Shigenari YAMAMOTO is assigned as CDM Lead Assessor by the Japan Quality Assurance Organization.

Date: February 26, 2007

Japan Quality Assurance Organization

M. Ueda

President Matahiro UEDA

Grant of sectoral scope to CDM/JI assessor

Assessor Name: Mr. Shigenari YAMAMOTO
Grade: Lead Assessor
Assessor No.: CDM-LA003 / JI-LA003

Sectoral Scope	Granted date
1. Energy industries (renewable - / non-renewable sources)	1 Nov. 2006
2. Energy distribution	-
3. Energy demand	17 Sep. 2004
4. Manufacturing industries	1 Jun. 2003
5. Chemical industry	-
6. Construction	-
7. Transport	-
8. Mining/Mineral production	1 Jun. 2003
9. Metal production	14 Oct. 2003
10. Fugitive emissions from fuels (solid, oil and gas)	1 Jun. 2003
11. Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	1 Nov. 2006
12. Solvents use	-
13. Waste handling and disposal	1 Jun. 2003
14. Afforestation and reforestation/Land use, land-use change and forestry	-
15. Agriculture	-

This is to certify that Mr. Shigenari YAMAMOTO is granted by the Japan Quality Assurance Organization.

Date: 18/APR/2007

Director of the Global Environment Department
Japan Quality Assurance Organization


Masaki MAEGAITO