
VALIDATION REPORT

Client name

Vikram Cement

PROJECT TITLE

**VIKRAM CEMENT: ENERGY
EFFICIENCY BY UP-GRADATION OF
CLINKER COOLER IN CEMENT
MANUFACTURING**

SGS Climate Change Programme

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Vikram Cement: Energy efficiency by up-gradation of Clinker cooler in Cement manufacturing	SGS Climate Change Programme
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1	Vikram Cement

<p>Summary</p> <p>SGS India Pvt. Ltd., an affiliate of SGS United Kingdom Ltd. has made a validation of the CDM project activity "Vikram Cement: Energy efficiency by up-gradation of Clinker cooler in Cement manufacturing" by Vikram Cement Vikramnagar P.O. Khor of Neemuch district of Madhya Pradesh state in India, on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.</p> <p>The scope of validation is the independent and objective review of the project design document, baseline study and monitoring plan and other relevant document of the project. The information in this document is reviewed against the criteria defined in the Marrakech Accords (Decision 17) and the Kyoto Protocol (Article 12) and subsequent guidance from the CDM Executive Board.</p> <p>The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications plan and/or corrective actions may provide input for improvement of the project design document (PDD).</p> <p>The overall validation process, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (UK.PP.12 issue 2 dated 01/07/2005).</p> <p>The first output of the validation process is a list of Corrective Actions Requests and New Information Requests (CAR and NIR), presented in Annex 2 of this document. Taking into account this output, the project proponent revised its project design document.</p> <p>In summary, it is SGS's opinion that the proposed CDM project activity correctly applies the baseline and monitoring methodology as mentioned in approved methodology adopted for the proposed project activity and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.</p>	
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Subject.:	
CDM validation	Indexing terms
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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CO ₂	Carbon Dioxide
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EIA	Environment Impact Assessment
GHG	Green House Gas(es)
GWh	Giga watt hour
I	Interview
IPCC	Intergovernmental Panel on Climate Change
ISHC	International Stakeholder Consultation
kWh	Kilo watt hour
MNES	Ministry of Non Conventional Energy Sources
MoEF	Ministry of Environment and Forest
MoV	Means of Verification
MP	Monitoring Plan
MPPCB	Madhya Pradesh Pollution Control Board
MT	Metric Tonne
NIR	New Information Request
PDD	Project Design Document
PPA	Power Purchase Agreement
UNFCCC	United Nations Framework Convention for Climate Change

Table of content

Table of content	4
1. Introduction.....	5
1.1 Objective	5
1.2 Scope	5
1.3 GHG Project Description	5
1.4 The names and roles of the validation team members.....	6
2. Methodology.....	7
2.1 Review of CDM-PDD and additional documentation.....	7
2.2 Use of the validation protocol	7
2.3 Findings.....	7
2.4 Internal quality control	8
3. Determination Findings	9
3.1 Participation requirements.....	9
3.2 Baseline selection and additionality	9
3.3 Application of Baseline methodology and calculation of emission factors	10
3.4 Application of Monitoring methodology and Monitoring Plan.....	10
3.5 Project design.....	11
3.6 Environmental Impacts.....	11
3.7 Local stakeholder comments.....	11
4. Comments by Parties, Stakeholders and NGOs	12
4.1 Description of how and when the PDD was made publicly available	12
4.2 Compilation of all comments received.....	12
4.3 Explanation of how comments have been taken into account.....	12
5. Validation opinion	13
6. List of persons interviewed.....	14
7. Document references	15

Annex 1: Local assessment

Annex 2: Validation Protocol

Annex 3: Overview of findings

1. Introduction

1.1 Objective

Vikram Cement has commissioned SGS to perform the validation of the project: "Vikram Cement: Energy efficiency by up-gradation of Clinker cooler in Cement manufacturing" with regard to the relevant requirements for CDM project activities. The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, the monitoring plan (MP) and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

1.2 Scope

The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

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.

1.3 GHG Project Description

The proposed CDM project activity is up-gradation of clinker cooler energy efficiency in cement manufacturing; located at Vikramnagar P.O. Khor of Neemuch district of Madhya Pradesh state in India. The project activity is the retrofitting of clinker cooler for effective trapping of the heat in the clinker cooler and involves the redesigning of the grate system with IKN plate type system, which will increase the clinker cooler efficiency. The project activity was started on 08th August 2000 and was commissioned on 1st April 2001.

Baseline Scenario:

Under the baseline scenario, there would have been more direct on-site emissions through burning of fossil fuels as a fuel in the rotary kiln for meeting thermal energy requirements in manufacturing of cement.

With Project Scenario:

The project activity reduces specific thermal consumption for cement production and conserves it. The project activity is redesigning of grate system for better heat trapping in clinker cooler it reduces specific thermal energy consumption and contributes to conservation of coal, a non-renewable natural resource and also reduced GHG emissions.

Leakage:

As per the methodology AMS II-D; applicable for the project activity, leakage is to be considered if the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity. However this is not the case for present project activity and hence no leakage is considered.

Environmental & Social Impacts:

According to project developer, there is no negative environmental and social impact expected due to the project activity.

1.4 The names and roles of the validation team members

Name	Role	Affiliate
Shivananda Shetty	Team Leader / Lead Auditor	SGS India
Sanjeev Kumar	Assessor	SGS India
Vikrant Badve	Local Assessor (Trainee)	SGS India
Irma Lubrecht	Technical reviewer	SGS the Netherlands

2. Methodology

2.1 Review of CDM-PDD and additional documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

A site visit is usually required to verify assumptions in the baseline. Additional information can be required to complete the validation, which may be obtained from public sources or through telephone and face-to-face interviews with key stakeholders (including the project developers and Government and NGO representatives in the host country). These may be undertaken by the local SGS affiliate. The results of this local assessment are summarized in Annex 1 to this report.

2.2 Use of the validation protocol

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
<i>The various requirements are linked to checklist questions the project should meet.</i>	<i>Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.</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.</i>	<i>This is either acceptable based on evidence provided (Y), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.</i>

The completed validation protocol for this project is attached as Annex 2 to this report

2.3 Findings

As an outcome of the validation process, the team can raise different types of findings

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

Where a non-conformance arises the Assessor shall raise a **Corrective Action Request (CAR)**. A

CAR

is issued, where:

- I. mistakes have been made with a direct influence on project results;
- II. validation protocol requirements have not been met; or
- III. there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be verified.

The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a NIR may result in a CAR. Information or clarifications provided as a result of an NIR may also lead to a CAR.

Observations may be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex 3). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

2.4 Internal quality control

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

3. Determination Findings

3.1 Participation requirements

The host Party for this project is India. India has ratified the Kyoto protocol on 26th Aug 2002. A Letter of Approval dated 28th October 2005; issued by the Indian DNA (reference number 4/16/2005-CCC) has been provided.

No Annex I Party has been identified in the PDD and therefore no further Letter of Approval was available. It is observed that the CDM EB has agreed that the registration of a CDM project activity can take place without an Annex I Party being involved at the stage of registration although it should be noted that before CER can be transferred to an Annex I Party, a Letter of Approval will need to be submitted.

3.2 Baseline selection and additionality

The project has applied baseline as mentioned in para 3 of the small scale methodology AMS II-D version 07 dated 28th November 2005 for "Energy efficiency and fuel switching measures for Industrial facilities" as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities. The project activity is reducing the use of energy in cement manufacturing and will fall under the category AMS II-D of the appendix B.

The project has adopted the Investment barrier for the present project activity to justify the additionality of the project. In addition to this project proponent has also mentioned few technological barriers faced during early operation period of the project activity. In order to get all the related documents on which basis the project was shown additional, NIR (09) was raised.

The additionality of the project was assessed using the investment barrier. The funds for the project activity were made available from the own funds (internal accruals) of the company. The project proponent has laid down a standard regarding IRR i.e. 18% for any investment for which documentary evidence was submitted and same was verified during discussions with Manager (Production, Planning and Budgeting). In response to NIR (09) project proponent has submitted spreadsheet giving calculations for Internal rate of return (IRR). After verifying the calculations it was concluded that the IRR for the project activity without considering CDM benefit was 12.1% and found less than the standard IRR value laid by the project proponent and also less than the prime lending rate laid by banks. With considering the CDM benefits for the project activity, IRR value was 21.1% slightly above the standard laid down by project proponent and also above the prime lending rate laid by banks. This made the project activity financially viable. Hence CDM was found a drive in going ahead with the project activity. The financial data, calculations and assumptions made in IRR calculation sheet were verified.

The documentary evidence for the shutdown losses and shutdown period of 15 days had not been submitted by the project proponent. Later in response to the NIR (09) Project proponent has submitted printout of log-book record as an evidence for the shutdown period and calculation for losses due to shutdown i.e. the same Rs.25.76 millions are also given in IRR calculation sheet. This has been verified during the site visit.

The Project proponent was not able to produce documentary evidence for the barriers due to prevailing practice mentioned in version 1 of the PDD; hence same are removed in the rephrased PDD and the NIR (09) was closed out.

The project proponent is claiming retroactive credits and has fixed ten years crediting period from 1st

August 2001. In order to meet the requirement of retroactive credit claim project proponent was asked to submit documentary evidence which indicates that the CDM project activity started between 1st January 2000 and date of registration of first CDM project activity; the NIR (06) was raised. The project proponent submitted the minute of board meeting held on 8th August 2000 and the same has been considered as the starting date of the project activity and verified during the site visit. It was found that the relevant meeting took place on 8th August 2000 and CDM was seriously considered to going ahead with the project activity. The same was verified with IRR sheet and the NIR (06) was closed out.

Based on the findings above, it was concluded that the project activity was not a likely baseline scenario and hence additional to any that would occur in absence of project activity.

3.3 Application of Baseline methodology and calculation of emission factors

The proposed CDM project activity is the retrofit in cooler for energy efficiency and uses baseline methodology as described under Type AMS II-D version 07 dated 28th November 2005 for “Energy efficiency and fuel switching measures for Industrial facilities” as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities.

The emission reduction calculation sheet was not provided with the PDD and hence the NIR (07) was raised. Responding to NIR (07) project proponent provided the calculations for emission reduction. It was checked by the local assessor and found that the aggregate energy savings of the project do not exceed 45 GWh_{th} per year which is the limit for the applicability of SSC methodology AMS II-D. Also project proponent's claim of project activity being a small scale project activity is checked from the scope of supply in which the guaranteed energy saving per kg of clinker production was given by the technology supplier. This was found to be less than 45GWh_{th}. The data source / parameters for baseline and project activity listed in table B 2(a) of PDD for calculating the cooler efficiency and energy savings were checked during the site visit. The local assessor checked the background information used for arriving at the value selected as benchmark for baseline emissions during the site visit. Also the calculations for baseline activity are included in emission reduction calculation spreadsheet. The baseline emission calculations and emission reductions were found to be in order during the desk review and during the local assessments at the site. The actual emission reduction figures would further be checked during verification. The NIR (07) is closed out.

3.4 Application of Monitoring methodology and Monitoring Plan

The present CDM project activity uses monitoring methodology as described in para 6 of the small scale methodology AMS II-D version 07 dated 28th November 2005 for “Energy efficiency and fuel switching measures for Industrial facilities” as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities.

The monitoring plan given in version 1 of the PDD was not clear; it was not clear from the monitoring plan that Also it was not as per AMS II-D version 07 dated 28th November 2005 methodology, as time period for which archived data will be available for reference was not mentioned in PDD. CAR (11) was raised for same. In response to CAR (11) project proponent made necessary changes in the monitoring plan and same was included in the rephrased PDD.

CAR (12) was raised as version 1 of the PDD was not clear on monitoring practice. The project proponent in his response to CAR (12) made all necessary corrections required and all the necessary parameters have been included in the monitoring plan given in the rephrased PDD. Project proponent has submitted relevant ISO 18000:1999, ISO 9000:2000, SA 8000:2001 and ISO 14000:2004 certificates and calibration certificates for all equipments used to monitor the data. Initial procedures for monitoring and data measurement were found to be in place by the local assessor during site visit. CAR (12) was closed out.

3.5 Project design

The Project Design Document (PDD) was designed as per version 2 of guidelines laid for preparing PDD of small scale CDM project activity hence the format of the present PDD was checked against it.

The project boundary given in version 01 of the PDD was not clear as it is not showing electrical energy input to cooler fans and also not indicating radiation losses from clinker cooler hence CAR (10) was raised for the same. The project proponent made required corrections in the project boundary and same are included in the rephrased PDD, the CAR (10) was closed out.

In PDD, few corrections were required in accordance with the guidelines for SSC PDD and CAR (03) was raised for the same. The PDD has been modified in accordance with the guideline for completion of the project Design document. The CAR was closed out.

CAR (04) was raised as there are some substantive issues needs to address in version 1 of the PDD. Project proponent has made necessary corrections in the rephrased PDD which are accepted and CAR (04) was closed out.

CAR (05) was raised to check the starting date of the project activity. The project proponent has submitted board MoM of 8th August 2000 in which project activity was considered. The document is obtained and verified during discussions with Sr. Executive President and CAR (05) was closed out.

3.6 Environmental Impacts

CAR (08) was raised to check the compliance with local environmental regulations in that EIA requirement for the project activity was checked and also project proponent was asked to submit consent to establish and operate from Madhya Pradesh Pollution Control Board, a local authority responsible for giving Environmental clearance. The project proponent in his response to CAR (08) has submitted the respective consents from Madhya Pradesh Pollution Control Board, and also given MoEF web link reference which mentions that EIA is not required for present project activity category. The project proponent in table under section F.2 in the PDD mentions in details regarding the Environmental Impacts on various parameters like fuel resources, Air quality, Water, Land, Noise generation and ecology and benefits to these parameters due to project activity.

3.7 Local stakeholder comments

The project proponent in version 1 of the PDD has not mentioned the identified local stakeholders and the summary of the comments received from them. In order to verify whether the project details were made publicly available and how the public comments on the project activity were invited; CAR (01) was raised. In response to CAR (01) the project proponent made necessary correction in identified local stakeholder list in the rephrased version of the PDD. Also project proponent has provided the copy of letters written to its employees and labour contractor who were responsible for the operation and maintenance of the project activity to the validator. This clarified the transparency in the LSC process.

The local stakeholders' comments were not clear in version 1 of the PDD hence CAR (02) was raised. Project proponent made necessary corrections and included corrected summary of comments in the rephrased PDD. CAR (02) was closed out. A copy of letters from the identified local stakeholders regarding their comments on project activity is also provided to the validator and same has been verified for any adverse impact to local community. It was also found that no public complain was registered to Madhya Pradesh Pollution Control Board office on project activity as consent to establish and consent to operate has been made available to validator. There is no adverse comment identified and CAR (02) was closed out.

4. Comments by Parties, Stakeholders and NGOs

In accordance with sub-paragraphs 40 (b) and (c) of the CDM modalities and procedures, the project design document of a proposed CDM project activity shall be made publicly available and the DOE shall invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. This chapter describes this process for this project.

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

The PDD and the monitoring plan for this project were made available on the SGS website <http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=128> and were open for comments from 19th August 2006 to 17th September 2006. Comments were invited through the UNFCCC CDM homepage.

4.2 Compilation of all comments received

The project was up loaded for International stakeholder consultation (ISHC) for a period of 30 days and received no comment. Also no adverse comment received during local stakeholder consultation.

4.3 Explanation of how comments have been taken into account

No adverse comment was received for the project activity.

5. Validation opinion

SGS has performed a validation of the project: “Vikram Cement: Energy efficiency by up-gradation of clinker cooler in cement manufacturing” at Vikramnagar P.O. Khor of Neemuch district of Madhya Pradesh state in India, by Vikram Cement. The Validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. Using a risk based approach, the review of the project design documentation and the subsequent follow-up interviews have provided SGS with sufficient evidence to determine the fulfilment of the stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by SGS for registration with the UNFCCC.

SGS has received confirmation by the host Party that the project activity assists it in achieving sustainable development.

By using energy efficient technology for distribution of clinker cooler on the grate system and thus improving effective trapping of heat in the clinker cooler, the project results in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change. A review of the investment analysis demonstrates that the proposed project activity was 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. The project is already implemented and is likely to achieve the estimated amount of emission reductions.

The validation is based on the information made available to SGS and the engagement conditions detailed in the 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 SGS 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.

The DOE declares herewith that in undertaking the validation of this proposed CDM project activity it has no financial interest related to the proposed CDM project activity and that undertaking such a validation does not constitute a conflict of interest which is incompatible with the role of a DOE under the CDM.

6. List of persons interviewed

Date	Name	Position	Short description of subject discussed
19/09/2006	R. M. Gupta	Unit Head	Project proponents view on project activity and CDM funds
18/09/2006	Mr. Umesh Srivastava	Manager (Production planning & Budgeting)	Technical description of project activity and baseline and data monitoring for project activity
18/09/2006	Mr. V.S.Bhalerao	Dy.General Manager (Production)	Additionality of the project activity
18/09/2006	Mr. Arun Dave	Sr. Manager (Production)	Technical description of project activity and baseline and data monitoring for project activity
18/09/2006	Mr. Purushottam Tripathi	Manager (Production)	Baseline condition and project activity details
18/09/2006	Mr.Anurag Vyas	Asst. Manager (Production)	Baseline condition and project activity details
18/09/2006	Mr. Sanjay Mistri	Head - Commercial	IRR calculation for project activity
19/09/2006	Mr.Vivek Mishra	Sr. Engineer	Local stakeholder consultation
19/09/2006	Mr. Dharmendra Singh Kushwaha	Fitter on project activity (Local stakeholder)	Local stakeholder consultation
19/09/2006	Mr. Manoj Kumar Jaiswal	Labour Contractor (Local stakeholder)	Local stakeholder consultation

7. Document references

Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

- /1/ HCA letter given by MoEF, Government of India (Attached as Annex 4 to the validation report)
- /2/ Modalities of communication (Attached as Annex 5 to the validation report)
- /3/ PDD version 1 dated 27th December 2005
- /4/ PDD version 2 dated 5th October 2006
- /5/ PDD version 3 dated 25th October 2006

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

- /1/ Purchase specification for IKN plate system
- /2/ Commissioning Certificate
- /3/ Minutes of Board Meeting
- /4/ Letter from CA
- /5/ Calibration certificates
- /6/ Letters to identified local stakeholders
- /7/ Letters from identified local stakeholders
- Consent to establish and Consent to operate from Madhya Pradesh Pollution Control Board (MPPCB)
- /8/ Baseline emission and Project emission calculation excel file.
- Calculation for Energy saving due to project activity.
- /9/ Communication with technology supplier
- /10/ ISO certificates
- /11/ Shutdown records
- /12/ Training module
- /13/ Copy of monitoring plan
- /14/ Financial analysis spreadsheet
- /15/ Internal communication letter
- /16/ Scope of supply for project technology
- /17/ Heat capacity formula

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ANNEX 1

LOCAL ASSESSMENT

CLIENT NAME
VIKRAM CEMENT

Project title
VIKRAM CEMENT: ENERGY EFFICIENCY BY UP-GRADATION OF CLINKER COOLER IN CEMENT MANUFACTURING

Project No. CDM.Val0748

Date: 060920

Table 12 Additional information to be verified by local assessors / site visit

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
12.1 To get copy Host Country Approval (HCA) letter from Project Proponent.	PDD F.1	DR	The letter has been obtained and verified with the original. The same was listed under heading Document references in Category 1 as /1/ and also attached as Annex 4 to validation report UK.AR.6.CDM.Val0748	Y	Y
12.2 No ODA has been used for this project and to be confirmed during site visit.	PDD Annex 2	DR/I	Project proponent has submitted letter from Company CA regarding funds availability for the project. The document varified and was listed under heading Document references in Category 2 as /4/.	Y	Y
12.3 Invitation for LSC meeting was sent to participate and communicate suggestions regarding the project activity. Documents are required to verify the same.	PDD G.1	DR/I	Letter written to Sarpanch of Rawan village, labour contractor and company employee seeking comments on the project activity have been obtained to verify the transparency in consultation process. The document was listed under heading Document references in Category 2 as /6/.	Y	Y
12.4 The regulatory approval (consent to establish and operate the project) from the Pollution Control Board is required to to verify that local/legal requirements have been met.	PDD G.1,G.2 and G.3	DR	The consent to operate and establish from MPPCB (Madhya Pradesh Pollution Control Board) have been obtained and listed under heading Document references in Category 2 as /7/.	Y	Y
12.5 Local stakeholders' comments are required to be verified for any adverse comment. Due account of stakeholder comments received required to be verified..	PDD G.1,G.2 and G.3	DR/I	There were no adverse comments found in the letters from identified local stakeholder. The same was listed under heading Document references in	Y	Y

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Category 2 as /7/.		
12.6 Project design engineering documents from the technology supplier are required to be checked. Copy of offer made/ specifications given by technology supplier.	PDD A.4	DR	Purchase specifications for Project activity were obtained and verified for the project capacity. The document was listed under heading Document references in Category 2 as /1/.	Y	Y
12.7 EIA report for the project activity.	PDD F.1	Web site	EIA requirement for the present project activity was checked with MoEF notification on MoEF website.	Y	Y
12.8 The monitoring plan required to be checked.	PDD D.3	DR/ SV	The monitoring plan for the project activity was checked and related documents are listed under heading Document references in Category 2 as /13/.	Y	Y
12.10 All the calibration certificates are required to be checked.	PDD D.3	DR	The certificates were obtained, verified and listed under heading Document references in Category 2 as /5/.	Y	Y
12.11 MoM of board meeting in which CDM was considered for the project activity. The commissioning certificate of the project activity.	PDD C.1.1		Project proponent has been submitted the MoM of board meeting in which CDM was considered for project activity. Also the commissioning letter from technology supplier was obtained. The documents were listed under heading Document references in Category 2 as /3/ and /2/.	Y	Y
12.12 Quality Assurance (QA) and Quality Control (QC) procedures for data monitoring.	PDD D.4	DR/ SV	QA and QC procedures for data monitoring were verified during site visit. The ISO certificates were obtained and listed under heading Document references in Category 2 as /10/.	Y	Y
12.13 Financial analysis for the project activity.	PDD B.3	DR	The financial analysis spreadsheet for the project activity was	Y	Y

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Documentary evidence for minimum IRR for any investment made by company.			submitted by project proponent and varified for IRR calculations. The document is attached in 'Project Doc' folder. Also documentary evidence giving minimum IRR for any investment was submitted by project proponent, same is obtained and verified.The document was listed under heading Document references in Category 2 as /14/.		
12.14 Calculation spreadsheet for baseline and project emission reductions during project crediting period. Spreadsheet giving detailed calculation for energy saved due project activity also	PDD E.2	DR	The excel spreadsheet for emission reduction calculation was obtained and varified for the relevant information in PDD. The document was attached in 'Project doc' folder.	Y	Y
12.15 Training module / material used during training programme for the employees.	PDD D.5	DR	The document was obtained; varified and listed under heading Document references in Category 2 as /12/.	Y	Y
12.16 Modalities of communication			The document was submitted and same was listed under heading Document references in Category 1 as /2/ and also attached as Annex 5 to validation report UK.AR6.CDM.Val0748	Y	Y
12.17 Opearational problems due to technology and communication made with technology supplier. Production loss due to shutdown.	PDD B.3	DR	The document was obtained; varified and listed under heading Document references in Category 2 as /9/ & /11/.	Y	Y

Revision history

Issue 2	Prepared by Gareth Phillips 3/11/05	Amendments to 1.10 and 1.11; exclusion of table 2 – 6 for SSC projects

Validation Protocol for Vikram Cement: Energy efficiency by up-gradation of clinker cooler in cement manufacturing.

This validation protocol is designed to ensure that the project meets the requirements for CDM projects that are detailed in paragraph 37 of the CDM modalities and procedures. Each requirement is covered in a separate table. The following requirements are discussed in this protocol:

Requirement	Description	
Participation requirements	The participation requirements as set out in Decision 17/CP7 need to be satisfied	Covered in table 1
Baseline and monitoring methodology	The baseline and monitoring methodology complies with the requirements pertaining to a methodology previously approved by the Executive Board	Baseline methodology is covered in table 2 Monitoring methodology is covered in table 4
Additionality	The project activity is expected to result in a reduction in anthropogenic emissions by sources of greenhouse gases that are additional to any that would occur in the absence of the proposed project activity	Covered in table 3
Monitoring plan	Provisions for monitoring, verification and reporting are in accordance with relevant decisions of the COP/MOP	Covered in table 5



Environmental impacts	Project participants have submitted to the designated operational entity documentation on the analysis of the environmental impacts of the project activity, including trans-boundary impacts and, if those impacts are considered significant by the project participants or the host Party, have undertaken an environmental impact assessment in accordance with procedures as required by the host Party;	Covered in table 6
Comments by local stakeholders	Comments by local stakeholders have been invited, a summary of the comments received has been provided, and a report to the designated operational entity on how due account was taken of any comments has been received;	Covered in Table 7
Other requirements	The project activity conforms to all other requirements for CDM project activities in relevant decisions by the COP/MOP and the Executive Board.	Covered in Table 8

Small sale projects and AR projects have specific requirements which are covered in Table 9-11. Small scale SSC projects have special requirements which deviate from the requirements of other CDM projects. These requirements are tested in table 9. Tables 2 to 6 are not applicable to SSC projects.

Further remarks on the use of this document:

- text in *italic blue* is meant as guidance for the assessor
- MoV = Means of Verification, DR= Document Review, I= Interview

This protocol should be adapted as required. For example, if the project is not a small scale project or an AR project, some tables can be deleted.

Table 1 Participation Requirements for Clean Development Mechanism (CDM) Project Activities (Ref PDD, Letters of Approval and UNFCCC website) All CDM project activities

REQUIREMENT	Ref	MoV	Comment	Draft finding	Final Concl
1.1 The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3 and be entered into voluntarily.	PDD	DR	Project will assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3. However, no Annex-1 participant has been identified so far.	OK	OK
1.2 The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof, and be entered into voluntarily	PDD	DR	The project activity is likely to contribute to sustainable development. Letter of approval from Host Country (India) Designated National Authority (DNA) has been submitted by the project proponent.	OK	OK
1.3 All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	PDD/ UNF CCC Web- site	DR/ UNF CCC Web- site	Project is unilateral and India has ratified the protocol on 26 th August 2002 and is allowed to participate. http://unfccc.int/parties_and_observers/parties/items/2109.php	OK	OK
1.4 The project results in reductions of GHG emissions or increases in sequestration when compared to the baseline; and the project can be reasonably shown to be different from the baseline scenario.	PDD	DR	The project activity will improve the energy efficiency in clinker cooler by effective trapping of the heat in clinker cooler and will reduce same amount of heat generated by fossil fuel firing and hence result in reduction of GHG emissions.	OK	OK
1.5 Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to	PDD	DR/ UNF	Yes, the project is listed on UNFCCC website from 19 th August 2006 to 17 th September 2006.	OK	OK

REQUIREMENT	Ref	MoV	Comment	Draft finding	Final Concl
comment on the validation requirements for minimum 30 days (45 days for AR projects), and the project design document and comments have been made publicly available.		CCC Web-site	http://cdm.unfccc.int/Projects/Validation/DB/OBIR/ULGZ6DOQBP62GM4DDZT4AIVD49/view.html The project was also listed on SGS climate change website from 19 th August 2006 to 17 th September 2006. http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=128 Number of comments received - 0		
1.6 The project has correctly completed a Project Design Document, using the current version and exactly following the guidance	PDD	DR	Project has used current version (version 2) of PDD applicable and followed the guidelines, except pending closure of some CARs/ NIRs.	Pending CAR3	OK CAR3 closed out
1.7 The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA.	PDD	DR	No ODA has identified in PDD. Evidence needs to be checked during site visit.	Site visit	OK
1.8 For AR projects, the host country shall have issued a communication providing a single definition of minimum tree cover, minimum land area value and minimum tree height. Has such a letter been issued and are the definitions consistently applied throughout the PDD?	PDD	DR	Not relevant as the project is not an AR project.	Not Applicable	Not Applicable
1.9 Does the project meet the additional requirements detailed in: Table 9 for SSC projects Table 10 for AR projects	PDD	DR	This is an SSC project which comes under category AMS I-D and hence table 9 is applicable.	OK	OK

REQUIREMENT	Ref	MoV	Comment	Draft finding	Final Concl
Table 11 for AR SSC projects					
1.10 Is the current version of the PDD complete and does it clearly reflect all the information presented during the validation assessment?	PDD	DR	The version of PDD used by project proponent gives all the information, except pending closure of some CARs/ NIRs.	Pending CARs/ NIRs	OK
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner?	PDD	DR	The PDD uses reliable information and that can be verified in an objective manner.	Pending site visit clarification	OK

Table 2 Baseline methodology/ies (Ref: PDD Section B and E and Annex 3 and AM) Normal CDM projects only

Table 3 Additionality (Ref: PDD Section B3 and AM) Normal CDM projects only

Table 4 Monitoring methodology (PDD Section D and AM) Normal CDM Projects only

Table 5 Monitoring plan (PDD Annex 4) Normal CDM Project activities only

Table 6 Environmental Impacts (Ref PDD Section F and relevant local legislation) Normal CDM Project Activities only

Table 7 Comments by local stakeholders (Ref PDD Section G) All CDM Project Activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
7.1 Have relevant stakeholders been consulted?	PDD	DR	The list of the relevant stakeholders consulted is not clear in PDD.	CAR1	OK CAR1 closed out
7.2 Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	The information regarding the project activity has been given through a circular to company employees and to the local population. Evidence to be checked.	Site visit	OK
7.3 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?	PDD	DR	Stakeholder consultation process is not required as per regulation/laws in host country. However, the project participant has consulted the stakeholders as a requirement for CDM project.	Site visit	OK
7.4 Is a summary of the stakeholder comments received provided?	PDD	DR	The summary of the stakeholder comments provided in PDD is not clear. Evidence needs to be checked during site visit.	CAR2	OK CAR2 closed out
7.5 Has due account been taken of any stakeholder comments received?	PDD	DR	No adverse comment identified in the PDD. Evidence to be checked during site visit.	Site visit	OK

Table 8 Other requirements All CDM project activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.1 Project Design Document					
8.1.1 Editorial issues: does the project correctly apply the PDD template and has the document been completed without modifying/adding headings or logo, format or font.	PDD	DR	The PDD template for version 02 has been tempered. Table A 4 used in PDD is not as per the guidelines mentioned in CDM-SSC-PDD (version 02).	CAR3	OK CAR3 closed out
8.1.2 Substantive issues: does the PDD address all the specific requirements under each header. If requirements are not applicable / not relevant, this must be stated and justified.	PDD	DR	The PDD address all the specific requirements under each header. Location of the project site in map is not clear. Crediting period year provided in table A 4 and E 2 does not matches with the information provided in section C.2.2.1 Foot-notes used in section E are not clear. Follow SI unit system.	CAR4	OK CAR4 closed out
8.2 Technology to be employed					
8.2.1 Does the project design engineering reflect current good practices?	PDD	DR	The project design engineering reflects the current good practices used in cement industry.	OK	OK
8.2.2 Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used	PDD	DR	The project uses state of the art technology supplied by IKN GMBH. The technical specifications of the project activity	Site visit	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
technologies in the host country?			need to be checked during site visit.		
8.2.3 Is the project technology likely to be substituted by other or more efficient technologies within the project period?	PDD	DR/I	Project technology will not likely to be substituted by other or more efficient technologies during the crediting period.	Site visit	OK
8.2.4 Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	PDD	DR	The project does require initial training to overcome the troubleshooting. The training has been provided by the technology supplier. The documentary evidence needs to be checked during site visit.	Site visit	OK
8.3 Duration of the Project/ Crediting Period					
8.3.1 Are the project's starting date and operational lifetime clearly defined and reasonable?	PDD	DR	Project activity starting date is mentioned in PDD as 31 st January 2001. Evidence for the same is required.	CAR5	OK CAR5 closed out
8.3.2 Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max. two x 7 years or fixed crediting period of max. 10 years)?	PDD	DR	Fixed crediting period of 10 years is selected for the project activity and it is reasonable. The project activity claims retrospective credits from 1 st April 2001.	NIR6	OK NIR6 closed out
8.3.3 Does the project's operational lifetime exceed the crediting period.	PDD	DR	The project's operational life time is expected to be 20 years which exceeds the crediting period of 10 years.	OK	OK

Table 9 Additional requirements for SSC project activities only

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
SSC projects use the SSC PDD and simplified baseline and monitoring methodologies as detailed in Appendix B (to the Modalities and Procedures for Small scale CDM projects, Annex II to Decision 21/CP.8) Indicative simplified baseline and monitoring methodologies for selected small scale CDM project activity categories.					
9.1 Does the project qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM?	PDD	DR	The project activity is energy efficiency project for industrial facility and it qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP.7. The total energy saved due to project activity needs to be checked during site visit.	Site visit	OK
9.2 The project conforms to one of the categories listed in Appendix B to Annex II to Decision 21/CP8	PDD	DR	Yes, AMS II-D version 7 dated 28 th November 2005.	OK	OK
9.3 The small scale project activity is not a debundled component of a larger project activity?	PDD	DR	Small scale project activity is not a debundled component of a larger project.	OK	OK
9.4 PDD has been prepared in accordance with appendix A of Annex II to Decision 21/CP8	PDD	DR	The CDM - SSC - PDD (version 2) template is followed.	OK	OK
9.5 The project uses a simplified baseline and monitoring methodology specified in Appendix B. If not, they may propose changes to the meths or a new SSC project category	PDD	DR	Yes, AMS II-D version 7 dated 28 th November 2005.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
9.6 Are the emission reductions determined in accordance with the methodology described	PDD	DR	Provide calculation spreadsheet for emission reduction calculations. Evidence to be provided for claim of reduction in carbon emissions from project activity.	NIR7	OK NIR7 closed out
9.7 Is there any bundling of SSC activities into one PDD? If so, does the monitoring plan consider sampling of activities? Refer to para 19 of Annex II. Also, note bundling provisions in SSC Briefing Note and SSC meths I C / I D and III D and Para 22e of Appendix B	PDD	DR	There is no bundling of SSC activities into one PDD.	OK	OK
9.8 Is EIA required by host party? If not, none is required irrespective of SHC. If yes, has one been performed consistent with local requirements?	PDD	DR	EIA requirement for said project activity by host Party is to be checked. Provide a copy of consent to operate and establish from Madhya Pradesh Pollution Control Board (MPPCB).	CAR8	OK CAR8 closed out
9.9 The project results in emission reductions that are additional in accordance with the following requirements: <ul style="list-style-type: none"> (Para 26) The project is additional if emissions are reduced below those in the absence of the project. 	PDD	DR	The project activity will improve the energy efficiency in clinker cooler by effective trapping of the heat in clinker cooler and will reduce same amount of heat generated due to fossil fuel firing.	OK	OK
<ul style="list-style-type: none"> (Para 27) Simplified baseline can be 			The simplified baseline as per AMS.II.D has been	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<p>used; if not, baseline proposed shall cover all gases, sectors and sources listed in Annex A to the KP</p> <ul style="list-style-type: none"> (Para 28) One or more barriers as detailed in attachment A to Appendix B to Annex II will be used to demonstrate that the project would not proceed without the CDM 			<p>used for the project activity.</p> <p>The investment barrier, technical barrier, barriers due to prevailing practise and other barrier mention in the PDD are not clear.</p> <p>Evidence needs to be checked.</p>	CAR9	OK CAR9 closed out
9.10 Leakage is calculated according to the provisions of the SSC methodologies in Appendix B	PDD	DR	As per methodology AMS II-D para 5, leakage for the project activity is not considered as the energy efficiency is achieved due to project activity is not because of the transfer of any energy efficient equipment.	OK	OK
9.11 The project boundary shall be constructed in accordance with the requirements of the SSC meths in Appendix B	PDD	DR	Project boundary is not clear in PDD.	CAR10	OK CAR10 closed out
9.12 The Monitoring plan shall be consistent with the requirements of the SSC methodology in Appendix B and shall provide for the collection and archiving of data needed to determine project emissions, baseline emissions and leakage.	PDD	DR	<p>Monitoring plan for the project activity is not clear in PDD.</p> <p>It does not mention the time period for which the data will be available for reference.</p>	CAR11	OK CAR11 closed out
9.13 The monitoring plan shall present good monitoring practice appropriate to the circumstances of the project activity.	PDD	DR	<p>Explain how parameter P.1 and P.2 are measured and calculated?</p> <p>Clarify which calorific value is used GCV or NCV.</p>	CAR12	OK CAR12 closed out

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			<p>Provide a copy of calibration certificates for the equipments used for measurement purpose.</p> <p>Provide a copy of monitoring procedures laid by the project proponent for the project activity.</p> <p>Parameters mentioned in monitoring plan are not clear. Explain the need to monitor parameter P.18.</p> <p>Explain the need for monitoring the baseline parameters.</p> <p>Documentary evidence to be provided for assumptions used in calculation of emission reduction.</p>		
9.14 If project activities are bundled, separate monitoring plan shall be prepared for each of the activities or an overall plan reflecting good monitoring practice will be prepared, consistent with the above requirements	PDD	DR	The SSC project is not a bundled project activity.	OK	OK

Table 10 Additional requirements for AR projects – Not applicable

Table 11 Additional requirements for SSC AR projects – Not applicable

Table 12 Additional information to be verified by local assessors / Site visit – Separate File attached

FINDINGS OVERVIEW

FINDINGS FROM VALIDATION OF “VIKRAM CEMENT: ENERGY EFFICIENCY BY UPGRADATION OF CLINKER COOLER IN CEMENT MANUFACTURING.”

Each Table below represents a finding from the validation assessment. The findings are numbered consecutively, approximately in the order that they have been identified.

[CDM.VAL0748]

Description of table:

Type	Findings are either New Information Requests (NIR) or Corrective Action Requests (CAR). CARs are items that must be addressed before a project can receive a recommendation for registration. NIRs may lead to the raising of CARs. Observations are included at the end and may or may not be addressed. They are primarily to act as signposts for the verifying DOE.
Issue	Details the content of the finding
Ref	refers to the item number in the Validation Protocol
Response	Please insert response to finding, starting with the date of entry.

Rows for comments and further response will be appended to the table until the Findings has been addressed to the satisfaction of the Lead Assessor.

Please note that this is an open list and more findings may be added as validation progresses.

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
1	CAR	The list of relevant stakeholders identified for the CDM project activity is not clear in PDD.	7.1
Date: 04 th October 2006 The section of stakeholder's comment is corrected in the revised PDD and all the relevant stakeholders are included.			
Date: 4 th October 2006 [Vikrant] [Comment from Local Assessor] The correction made in the revised PDD is acceptable.			
[Acceptance and close out] OK, Shiva (04/10/2006),			

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
2	CAR	The summary of the relevant stakeholders comments provided in PDD is not clear. The abbreviation 'MPCB' and 'RPCB' are not explained.	7.4
Date: 04 th October 2006 The same is corrected in the stakeholder section of PDD and the abbreviations made clear in the same section of revised PDD.			
Date: 4 th October 2006 [Vikrant] [Comment from Local Assessor]			

The corrections made in the revised PDD are acceptable.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
3	CAR	Table A 4 used in PDD is not as per the guidelines mentioned in CDM-SSC-PDD (version 02).	8.1.1

Date: 4th October 2006

The table is corrected as per the guidelines mentioned in CDM-SSC-PDD ver 02.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]

The correction made in the revised PDD is acceptable.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
4	CAR	Location of the project site in map is not clear. Crediting period year provided in table A 4 and E 2 does not matches with the information provided in section C.2.2.1 Foot notes used in section E of PDD are confusing with the numeric used in the formulae. Follow SI units system in PDD.	8.1.2

Date: 4th October 2006

The map is indicating the project site at Neemuch district which is in Madhya Pradesh. Same is shown in the PDD.

The crediting period is starting from the August 01, 2001 and same is corrected every where in the revised PDD.

The footnote numbering is changed in the revised PDD. The units used are normally applicable across the cement industries and in same format those are used.

The excel sheet can clarify the use of units and same is attached.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]

The corrections made regarding location of project activity, starting date of project activity and footnote numbering is acceptable also clarification given regarding use of SI units system is acceptable.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
5	CAR	The starting date of project is 31 st January 2001 as mentioned in PDD. Documentary evidence is required for the verification of the same.	8.3.1

Date: 04th October 2006,

The starting date of project activity mentioned in the PDD is the erection date of the project activity. The actual decision for the project is considered on 8th August 2000. The same is corrected and proof is submitted to the validators.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]
A copy of MoM held on 8th August 2000 has been submitted by project proponent. The document is verified for concern information and is acceptable.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
6	NIR	The project is claiming for retrospective credits from 1 st April 2001, hence Board MoM in which CDM benefits was considered for the project activity required to submit.	8.3.2

Date: 04th October 2006

The project activity is the modification in the existing system. The MoM of 8th August 2000 is submitted to the validators as CDM consideration.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]
A copy of MoM held on 8th August 2000 has been submitted by project proponent. The document is verified for concern information and is acceptable.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
7	NIR	Provide spreadsheet for emission reduction calculations.	9.6

Date: 04th October 2006

The calculation excel sheet is submitted to validators.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]
The excel calculation sheet for emission reduction calculations has been submitted and the same is verified for the emission reduction calculations.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
8	CAR	Project proponent is required to submit a copy of MoEF which states that EIA is not required for the project activity. A copy of relevant consent to operate and establish is required to provide by project proponent.	9.8

Date: 04th October 2006

The investment for the project is less than 50 crore. The EIA notification is submitted to the validators.

The Consent to operate and establish from pollution control board is submitted to the validator.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]
The EIA notification has been submitted by project proponent; the same is verified and found acceptable.
A copy of consent to establish and consent to operate has been submitted by project proponent same is verified and found acceptable.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
9	CAR	Investment barrier, technical barrier, barriers due to prevailing practise and other barriers mentioned in PDD are not clear. IRR calculation spreadsheet is required to submit. The documentary proof or internal communication letter is required to submit which states the minimum acceptable IRR for any investment. Documentary evidence for Production loss due to project activity needs to be provided.	9.9

Date: 04th October 2006

The barriers are revised in the PDD. The investment calculation sheet is submitted to the validators.

The minimum rate of return (18%) required in the group, the document for the proof of same is submitted.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]

The corrections made regarding additionality analysis in the revised PDD are acceptable and verified during site visit.

The project proponent has submitted a copy of internal communication which states that the minimum internal rate of return (IRR) for any investment made by group was 18%. The document is acceptable. The IRR was found below the prime lending rate from the bank too. The calculation has been verified and found after consideration of CDM benefits the IRR was 21.1%.

Evidence for the shut down has been given and production loss has been included in IRR calculation sheet. The same was verified during site visit.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
10	CAR	Please elaborate the project boundary.	9.11

Date: 04th October 2006

The same is corrected in the revised PDD.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]

The correction made in revised PDD is acceptable.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
11	CAR	Monitoring plan for the CDM project activity is not clear in PDD. Please mention the time period for which the archived data will be available for reference.	9.12

Date: 04th October 2006

The monitoring plan is revised in the corrected PDD.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]

The relevant corrections made in monitoring plan in the revised PDD are acceptable.

[Acceptance and close out] OK, Shiva (04/10/2006),

Date: 25th Sept. 2006

Raised by: S Kumar

No.	Type	Issue	Ref
12	CAR	<p>Explain how parameter P.1 and P.2 are measured and calculated?</p> <p>Clarify which calorific value is used GCV or NCV.</p> <p>Provide a copy of calibration certificates for the equipments used for measurement purpose.</p> <p>Provide a copy of monitoring procedures laid by the project proponent for the project activity.</p> <p>Parameters mentioned in monitoring plan are not clear. Explain the need to monitor parameter P.18.</p> <p>Explain the need for monitoring the baseline parameters.</p> <p>Documentary evidence to be provided for assumptions used in calculation of emission reduction.</p>	9.13

Date: 04th October 2006

The relevant corrections are made in the revised PDD.

The GCV is used in the calculations.

The all documentary evidences are provided for the assumption of the same.

Date: 4th October 2006 [Vikrant] [Comment from Local Assessor]

The relevant corrections made in the revised PDD are acceptable.

Also the documentary evidence for assumptions used in emission reduction calculation are provided and found acceptable.

[Acceptance and close out] OK, Shiva (04/10/2006),

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