VALIDATION REPORT

The Arvind Mills Ltd. (AML)

Renewable biomass residue based steam generation at Arvind Mills, Santej.

SGS Climate Change Programme
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Date of issue:	Project No.:
12/06/2007	CDM.Val0882
Project title	Organisational unit:
Renewable biomass residue based steam generation at Arvind Mills, Santej	SGS Climate Change Programme
Revision number	Client:
1.0; 24/08/2007	The Arvind Mills Ltd. (AML)

Summary

SGS India Pvt. Ltd., an affiliate of SGS United Kingdom Ltd. has made a validation of the CDM project activity "Renewable biomass residue based steam generation at Arvind Mills, Santej", 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. The project falls under small scale category and scope 1. Energy Industries (Renewable/ Non-renewable sources).

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.

The overall validation process, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (UK.PP.12 issue 3 dated 19/01/2007).

The first output of the validation process is a list of Corrective Actions Requests and New Information Requests (CAR and NIR), presented in Annex 3 of this document. Taking into account this output, the project proponent revised its project design document.

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.

Subject Group:			
CDM validation			**Indexing terms**
Work carried out by			
Mr. Sanjeev Kumar – Team Leader Mr. Vikrant Badve – Assessor Mr. Jimmy Sah – Local Assessor			
Technical review			
Dr. Jochen Gross			☒ No distribution without permission from the Client or responsible organisational unit
Authorized signatory			
Siddharth Yadav			☐ Limited distribution
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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CO2	Carbon Dioxide
COP/MOP	Conference of parties serving as the meeting of parties to Kyoto Protocol
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EIA	Environment Impact Assessment
FBC	Fluidized Bed Combustion
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
MoEF	Ministry of Environment and Forest
MoV	Means of Verification
MP	Monitoring Plan
MW	Mega watt
MT	Metric Tonne
NIR	New Information Request
NGO	Non Government Organisation
NOC	No Objection Certificate
ODA	Official Development Assistance
PDD	Project Design Document
PLF	Plant Load Factor
UNFCCC	United Nations Framework Convention for Climate Change

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Table of content

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1 Introduction

1.1 Objective

The Arvind Mills Ltd. (AML) has commissioned SGS to perform the validation of the project: "Renewable biomass residue based steam generation at Arvind Mills, Santej" 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 a steam generation project by utilizing the available renewable biomass residues and supplying the same to for in-house consumption. The project will result in replacing the fossil fuel which would have been used for producing the same quantity of steam. The project activity is located at Gandhinagar district of Gujarat state in India. The project activity was already commissioned and working in satisfactory condition. The project technology implemented is Fluidized Bed Combustion (FBC) system which consists of a furnace and boiler which was commissioned in May 2002 this was checked during the site visit and cross-checked from letter issued by Chief Boiler Inspectorate of Gujarat state.

Baseline Scenario:

Under the baseline scenario, there would have been more direct off-site emissions through burning of fossil fuel in the coal based Fluidized Bed Combustion Boiler for meeting steam requirements of the Arvind Mills limited.

With Project Scenario:

The project activity generates and supplies the steam produced for the in house consumption at Arvind Mills Limited. This fulfil the steam requirement which otherwise would have been fulfilled by utilizing coal as a fuel for Fluidized Bed Combustion Boiler. Thus project activity replaces thermal energy from fossil fuel and contributes to conservation of fossil fuel, a non-renewable natural resource and consequently reduces GHG emissions.

Leakage:

As per the methodology AMS I C version 09 dated 23rd December 2006; applicable for the project

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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 for the present CDM project activity.

Environmental & Social Impacts:
There are no negative environmental and social impacts expected with the project activity, the same has been cross-checked during local stakeholder consultation process by the local assessor during the validation site visit.

1.4 The names and roles of the validation team members

Name	***Role***
Mr. Sanjeev Kumar	Team Leader / Lead Auditor
Mr. Vikrant Badve	Assessor
Mr. Jimmy Sah	Local Assessor
Dr. Jochen Gross	Technical reviewer

Statement of Competence of team members are attached at Annex IV.

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***
The various requirements are linked to checklist questions the project should meet.	*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.*	*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.*	*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.*

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.

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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 from Indian DNA was not submitted by the project proponent. CAR (1) was raised asking project proponent to submit the Letter of approval from Indian DNA. Project proponent has received the Host country approval for the present project activity on 25th April 2007 issued by the Indian DNA (reference number 4/23/2006-CCC. This letter was checked and the project activity name indicated in the HCA and in section A.1 of the PDD was found same. CAR (1) was closed.
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 the small scale methodology AMS I-C version 9 dated 23rd December 2006 for "Thermal energy for the user" as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities. The project activity generates steam from using biomass residues as a fuel and thus replaces fossil fuel and contributes to conservation of fossil fuel, and fall under the category AMS I-C of the appendix B.

The present CDM project activity will generate and use the steam as process consumption within the premise. This will fulfil the steam requirement which otherwise would have been fulfilled by the steam generation by using fossil fuels. The emission reductions achieved because of the project activity will be direct function of the amount of steam generated for in-house consumption.

The project has adopted the Investment barrier for the present project activity by providing the levelized cost comparison analysis to justify the additionality of the project. In addition to this project proponent has also mentioned Other Barriers faced due to Biomass Availability and Biomass pricing. In order to get all the related documents on the basis of which the project was shown additional, CAR (15) was raised.

The project proponent has done the levelized cost analysis for production of steam using alternatives available i.e. Furnace Oil, Coal and biomass. Levelized cost analysis calculates the per kg cost for producing steam from each of the alternative fuel i.e. furnace oil, coal and biomass. This cost comes out to be 0.731 Rs/kg, 0.325 Rs/kg and 0.428 Rs/kg of steam respectively. The levelized cost analysis includes certain assumptions which were cross-checked during validation against the data source as mentioned in the excel spreadsheet for levelized cost analysis. The data source for each assumption was verified and its authenticity and traceability was checked during the site visit and discussion with the project proponent. The project proponent was asked to clarify why Natural Gas was not considered as a fuel for the project activity. The project proponent responded that Natural Gas pipeline connecting Arvind Mills was commissioned in December 2004 and thus this option was not viable during the installation of the project activity.

The project proponent was asked to clarify for why was there a delay to approach for CDM funds for the project activity. The project proponent provided the Expenditure approval form for the project activity dated 03/09/2001 which mentions about CDM funds to be considered for the project. But the project proponent were not aware for the procedures to be followed to get the project registered as a CDM project activity and hence the delay.

Based on the above discussion it can be concluded that the project activity without CDM funds is not a financially viable alternative. Hence CAR (15) was closed.

The present project activity uses a Fluidized Bed Combustion Boiler to produce steam and supply the same for in-house consumption at Arvind Mills. NIR (06) was raised asking the project proponent to submit the Purchase orders to cross check the technical specifications as mentioned in the PDD for the project activity. In response the project proponent provided all the Purchase orders and technical specifications from the manufacturer (Cethar Vessels). The specifications as mentioned in the PDD were checked with that provided in the technical specification sheet of Cethar Vessels and they were found acceptable, hence NIR (6) was closed.

NIR (08) was raised and project proponent was asked to discuss if any initial training was provided to the staff for operating the FBC boiler. In response the project proponent provided the training certificates provided by Cethar Vessels to operate the boiler during the commissioning and performance monitoring phase. The rephrased version of PDD mentions about Training being provided to the staff. During site visit it was cross checked with the operators and they were found to be aware of the monitoring procedures. Hence NIR (08) was closed.

The project proponent is claiming credits from 30th July 2007 or from date of registration whichever is later. The present project activity has chosen ten years fixed crediting period. This was verified during the discussion with the project proponent.

3.3 Application of Baseline methodology and calculation of emission factors

The present project activity was generating process steam and which is used for in-house consumption. The project has applied baseline methodology as mentioned in the small scale methodology AMS I-C version 9 dated 23rd December 2006 for “Thermal energy for the user” as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities.

It was mentioned in the PDD version 01 that the present project activity will generate 31,354 tonnes of $C0_{2e}$ emission reductions per year. Project proponent has not provided excel spreadsheet for calculation of and baseline as well as project emissions for the project activity. NIR (11) was raised and project proponent was asked to provide the excel spreadsheet for the same. The project proponent submitted excel spreadsheet giving Emission reduction calculations which mentions 32,055 tonnes of $C0_{2e}$ per annum will be generated due to project activity. The excel sheets were checked for the values and assumptions used and were found acceptable. The rephrased version of PDD was checked for the emission reduction figure and same was found matched with excel spreadsheet figure; hence NIR (11) was closed.

The PDD version 1 mentioned that baseline emissions would be calculated based on paragraph 6 and 7 of 1 C of appendix B. CAR (14) was raised and the project proponent was asked to clarify the same. In response the project proponent provided the excel sheets for calculating the baseline emissions for the project activity. The excel sheets that were provided used GCV values for calculating the baseline emissions while NCV values for calculating the project emissions. The project proponent was asked to use NCV values at all the places. In response the project proponent used NCV values as specified by IPCC 2006 Guidelines. The baseline emission calculations and emission reductions would be further checked verification. Thus CAR (14) was closed.

The PDD version 1 under the section B.2 mentioned that “The project activity entails replacing old unit for more efficient unit” but the fuel used was not provided, CAR (13) was raised and project proponent was asked to clarify the same. In response the project proponent mentioned that the project activity is a new facility installed and does not involve replacing any old units. During the site visit it was cross-checked and was found that the project activity is a newly installed FBC boiler which uses biomass

residues as a fuel for generation of steam which is used for in-house consumption. Thus CAR (13) was closed.

The PDD version 1 did not mention about leakage due to transport of biomass for the project activity. CAR (16) was raised and the project proponent was asked to discuss about leakage occurred due to transport of biomass for the project activity and also mention the distance from where the biomass will be procured. In response the project proponent mentioned that leakage due to transport of biomass is not considered as under the baseline conditions the distance for coal transport would be around 400 kms while the transport for biomass is around 10 kms and so there is a positive leakage associated with the project activity and thus the leakage for the project activity has been neglected. Also as per methodology AMS I-C version 09 dated 23rd December 2006; leakage is to be considered when there is an equipment transfer from one place to another but this is not the case with present project activity hence no leakage from the transfer of equipment is not considered. Thus CAR (16) was closed and leakage for the project activity was not considered.

The project proponent's claim of project activity being a small scale project activity was also checked by the local assessor. The PDD version 01 did not mention the energy output from the project activity. NIR (10) was raised and the project proponent was asked to mention the same in the PDD. In response the project proponent mentioned the energy output as 11.4 MW under section B.2 of the rephrased version of the PDD. The calculations for the energy output has been provided by the project proponent the same was checked and it was found to be 11.4 MW which is less that 15 MW and hence project was eligible under small scale category. And thus NIR (10) was closed.

3.4 Application of Monitoring methodology and Monitoring Plan

The present CDM project activity uses monitoring methodology AMS I-C version 09 dated 23rd December 2006 for "Thermal energy for the user". The PDD clearly mentions that leakage is not consider in present project activity as methodology AMS I-C version 09 mentions leakage due to project activity will be consider when there is an equipment transfer from one place to another but this is not the case with present project activity hence no leakage due to transfer of equipment for the project is considered. This was acceptable.

During the review of version 1 of the PDD it was found that project proponent has not mentioned about monitoring of leakage for the project activity. NIR (18) was raised for the same. In response the project proponent mentioned that as the project activity leads to positive leakage so the emissions can be neglected as a conservative approach. Further it was clarified that some quantity of Charcoal and diesel would be used during the cold start up for the project activity and the emissions by the same would be monitored. This was accepted and the corrections made were cross checked with the rephrased version of the PDD and found acceptable, hence NIR (18) was closed.

The project proponent did not mention the Quality Control and Quality Assurance procedures followed for the project activity. CAR (19) was raised and the project proponent was asked to submit the QA/QC procedures and calibration certificates for the equipment used in the project activity. In response the project proponent provided the calibration certificates for the project activity. Training requirements to operate the boiler given by Cethar Vessels was also submitted. A copy of Good management practices that are followed for the project activity has been submitted and it mentions about all the roles and responsibilities of each personnel involved in the project activity. During site visit it was cross-checked and found that personnel involved were aware of the procedures laid down for the project activity and thus CAR (19) was closed.

3.5 Project design

The PDD of the present project activity have been prepared in accordance with the guidelines for

completing CDM-SSC-PDD version 04 and CDM-SSC-PDD template version 03. Thus when PDD was cross checked against these guidelines and template it was found that requirements under the section A.4 are not according to the guidelines for completing CDM-SSC-PDD and the PDD version 1 referred to section D.2.1 on page 19 but the same was not found in the PDD, hence CAR (05) was raised. Project proponent mentioned that the project technology implemented has been described under section A.4.2 rephrased the PDD which did not referred to section D.2.1. The rephrased version of PDD was checked and the technology implemented was found under section A.4.2 while the reference for section D.2.1 was not found. This was acceptable and hence CAR (05) was closed.

The section B.6.4 was not according to the template version 03 for completing the PDD, hence CAR (04) was raised. In response the project proponent corrected the section B.6.4. The rephrased version of the PDD was checked and section B.6.4 was corrected as per the template and hence CAR (06) was closed.

It was found that section C.1.1 of version 01 of the PDD indicated 1st August 2001 as project activity starting date; but evidence for the same was not provided. NIR (09) was raised asking project proponent to provide an evidence for the starting date of the project activity. In response project proponent provided a copy of Indent letter to the boiler manufacture which is also attached in the audit trail folder and mentioned in section 7 of this report, the date mentioned on the letter is 13th September 2001 and the same date was mentioned as the project activity start date. The rephrased version of the PDD was checked and the section C.1.1 mentioned 13th September as the project activity starting date. Thus NIR (09) was closed and 13th September 2001 was accepted as starting date for the project activity. The project proponent also submitted the Expenditure approval form for the project activity dated 3rd September 2001 in which the project activity was discussed and CDM benefits for the project activity was considered. This was verified during the discussion with the project proponent.

The project boundary given in version 01 of the PDD was clear as where the steam generated by the project activity would be consumed NIR (17) raised and the project proponent was asked to mention the same in the PDD. In response the project proponent under the rephrased version of PDD mentioned that steam generated would be used for in-house consumption, this was acceptable and NIR (17) was closed.

Operational lifetime of the project activity was mentioned as 30 years which was found acceptable after reviewing the project technology details mentioned in the purchase order of the project activity component. NIR (07) was raised asking project proponent to provide any documentary evidence that the present project technology will not be substituted or replaced by the more efficient technologies during the crediting period. Project proponent has submitted a letter of undertaking mentioning that the project technology will not be substituted or replaced by more efficient technology during the crediting period. This was accepted and NIR (07) was closed.

Project proponent in the PDD mentioned that project activity has not received any public funding from parties listed in Annex 1. NIR (02) was raised asking the project proponent to provide any documentary evidence that ODA was not used for the project activity. The project proponent has submitted an undertaking which states that no ODA was used for the project activity. This was acceptable and hence NIR (02) was closed.

3.6 Environmental Impacts

The project proponent in the PDD version 01 did not mention whether EIA has been carried for the project activity or not. CAR (12) was raised and the project proponent was asked to provide details whether EIA has been carried for the project activity or not, he was also asked to submit the necessary

consents required by the project activity. The project proponent in his response mentioned that EIA is not required for the project activity and the submitted the clearance and consent to operate from Gujarat Pollution Control Board, also the Certificate to operate from the Boiler inspector. The consent and certificates were checked and found acceptable and hence CAR (12) was closed.

3.7 Local stakeholder comments

The project activity involves installation of a FBC boiler to generate steam for in-house consumption for Arvind Mills. The project uses biomass residues as fuel for the boiler.

The project proponent identified local communities, employees, contactors and GPCB as stakeholders for the project activity. NIR (03) was raised asking project proponent to provide evidence how concern local stakeholders were informed regarding the present CDM project activity by the project proponent. In response the project proponent provided the intimation letters for the stake holders and the summary of comments for the project activity. During site visit it was cross checked with the local stakeholders and no negative comments were found. The summary of comments provided for the project activity was found acceptable after discussion with the local stakeholders and hence NIR (03) was closed.

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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=205 and were open for comments from 06/02/2007 until 07/03/2007. Comments were invited through the UNFCCC CDM homepage.

4.2 Compilation of all comments received

Comment number	*Date received*	*Submitter*	*Comment*
1	26/02/2007	Name: Hiral City: Ahmedabad Organisation: Paryavaran mitra Country: India	Please make sure uninterrupted supply of biomass from local supplier. • What is ultimate result of biomass residue in boiler? If it is burnt then will it not contribute to GHG? Solid waste will also be generated from it. Where it will be disposed off? • In one unit of Arvind mill natural gas is available for boiler to switch over of fuel (AI & AC) But here in this PDD it is written that natural gas is not available for this unit though there is small distance between them. Then why natural gas option is not considered?
2	06/03/2007	Name: Rama City: Bangalore Organisation: Individual Country: India	The Net Calorific Value considered for Coal is mentioned as 3600Kcal/kg (Pg. 13), at the same time NCVcoal considered for calculating the baseline emissions is 5000kcal/kg (Pg. 23&24). Both the values are indistinct and moreover the assumption for NCVcoal as 5000kcal/kg looks higher and not true value to be considered. Any source as such to prove the value is so much? Does the PP have any earlier records showing consumption and heat value of coal since it is a fuel switch project i.e., coal replaced by biomass? How the PP obtain the figure of 21,840 MT of biomass per year. In my opinion it is not matching theoretically and looks high as per the assumptions mentioned in the section B.7.1 (i.e., considering 80% efficiency, 13TPH boiler capacity, Steam and feed water enthalpy and NCV of biomass). The basic conjecture to be measured is the operation hours of the plant in a year. Operation hours of the plant are not mentioned in the PDD. The figure 21,840MT is high even if you consider 365days of operation, which is wide of the mark in the case of biomass based plants since they highly depend on the monsoons and crops. How can a biomass based plant run throughout the whole year relying only on locally available seasonal biomass, in such case any fossil fuel being used in the plant for continuous operation? Justify this? The additionality is not addressed as per the

Comment number	Date received	Submitter	Comment
			terms given in Attachment A of Appendix B. whole additionality has to be rephrase subsequently. How can lignite been chosen as an alternative. This alternative is not lucrative neither to the PP nor does it satisfy the sustainability issue by replacing baseline fuel (coal). Elimination of alternatives is not convincing and justifiable. Project has no Barriers. Seem to be like the project doesn't have any other barrier other than the availability of biomass. Even that can be excluded, because the PP had contradicted that by considering the 365days of operating hours for emission reductions calculations, which means biomass is available throughout the year, hence no barrier. Justify? Page 19 says "Please refer to Section D.2.1 for details", By referring so one cannot see any relevant explanation in section D.2 PP should consider project emissions though negligible. Address project emissions w.r.t. to the transport of emissions from 1. combustion of fossil fuels for transportation of biomass residues to the project plant 2. any Carbon dioxide emissions from on-site consumption of fossil fuels 3. Methane emissions from combustion of biomass residues In case (1): this cannot be neglected because the biomass residues in absence of this project wouldn't be utilized. The project activity creates the transportation of biomass residues to the plant, wherein in absence of this project this would not have happened. Hence this should be included in the project boundary and as well to be considered for project emissions. Justify (2) and (3) Address and mention leakage w.r.t to Attachment C (information on leakage in biomass project activities

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4.3 Explanation of how comments have been taken into account

Date: 26/02/2007 Raised by: Hiral

No.	Issue	Ref
1	Please make sure uninterrupted supply of biomass from local supplier. • What is ultimate result of biomass residue in boiler? If it is burnt then will it not contribute to GHG? Solid waste will also be generated from it. Where it will be disposed off? • In one unit of Arvind mill natural gas is available for boiler to switch over of fuel (AI & AC) But here in this PDD it is written that natural gas is not available for this unit though there is small distance between them. Then why natural gas option is not considered?	4.2

Date: [Response from project developer]

The project proponent has made annual biomass residue contract with biomass supplier which will enable AML to use renewable biomass residue (DOC) on a continuous basis. Further, if there is any use of fossil fuel (required during start-up of boiler) in the crediting period, will be monitored and deducted as project emissions.

- Biomass residue as per UNFCCC definition is a renewable biomass fuel which is carbon neutral by nature. Therefore combustion will generate no GHG emissions.
  Some quantum of ash is generated as a result of control combustion of biomass. The ash generated is utilized by the brick manufacturer, for brick making Proof of contract with brick manufacturer has been provided to the validator.
- During the period of project implementation of the project activity, NO natural gas was available with the project proponent. Non-Availability/Limited availability of Natural Gas is one of the key drivers which make NG option non-viable. Further Natural Gas based Steam Generation is not an economically feasible alternative and has therefore been excluded from the baseline scenario analysis.

Date: [12/06/2007] [Jimmy Sah][Comments from Local Assessor]

The above explanations are self explanatory and they address the comments.

[Acceptance and close out] OK Sanjeev Kumar [12/06/2007]

Date: 06/03/2007 Raised by: Rama

No.	Issue	Ref
2.1	The Net Calorific Value considered for Coal is mentioned as 3600Kcal/kg (Pg. 13), at the same time NCVcoal considered for calculating the baseline emissions is 5000kcal/kg (Pg. 23&24). Both the values are indistinct and moreover the assumption for NCVcoal as 5000kcal/kg looks higher and not true value to be considered. Any source as such to prove the value is so much? Does the PP have any earlier records showing consumption and heat value of coal since it is a fuel switch project i.e., coal replaced by biomass?	4.2

Date: [Response from project developer]

Appropriate NCV of coal is included in the revised PDD.

The project activity is green field project activity and the project proponent doest not have any experience in coal based boiler operation and earlier records showing consumption values

Date: [12/06/2007] [Jimmy Sah][Comments from Local Assessor]

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NCV values from IPCC guidelines 2006 are used and this is acceptable.
[Acceptance and close out] OK Sanjeev Kumar [12/06/2007]

Date: 06/03/2007 Raised by: Rama

No.	Issue	Ref
2.2	How the PP obtain the figure of 21,840 MT of biomass per year. In my opinion it is not matching theoretically and looks high as per the assumptions mentioned in the section B.7.1 (i.e., considering 80% efficiency, 13TPH boiler capacity, Steam and feed water enthalpy and NCV of biomass). The basic conjecture to be measured is the operation hours of the plant in a year. Operation hours of the plant are not mentioned in the PDD. The figure 21,840MT is high even if you consider 365days of operation, which is wide of the mark in the case of biomass based plants since they highly depend on the monsoons and crops.	4.2
Date: [Response from project developer] The biomass quantity of 21,840 MT is approximate. Considering 13TPH and 80 % boiler efficiency for biomass based steam generation would have been approximately 19,000 MT/annum. This provides justification for the question raised.		
Date: [12/06/2007] [Jimmy Sah][Comments from Local Assessor] The biomass quantity mentioned in the PDD version 1 was an estimate and the rephrased version of the PDD uses the value of biomass as observed in the year 2006. This is acceptable.		
[Acceptance and close out] OK Sanjeev Kumar [12/06/2007]		

Date: 06/03/2007 Raised by: Rama

No.	Issue	Ref
2.3	How can a biomass based plant run throughout the whole year relying only on locally available seasonal biomass, in such case any fossil fuel being used in the plant for continuous operation? Justify this?	4.2
Date: [Response from project developer] For complete year round availability of biomass AML has made a contract with biomass supplier. However uncertainty lies in terms of availability and pricing. The project activity operates for 350 days which include preventive and scheduled shutdowns. The facility only utilizes biomass residues and there is no provision for fossil fuel usage. Document indicating, contract DOC purchase, Castor produce in the region and DOC availability are provided with the validator.		
Date: [12/06/2007] [Jimmy Sah][Comments from Local Assessor] The above explanation is self explanatory.		
[Acceptance and close out] OK Sanjeev Kumar [12/06/2007]		

Date: 06/03/2007 Raised by: Rama

No.	Issue	Ref
2.4	The additionality is not addressed as per the terms given in Attachment A of Appendix B. whole additionality has to be rephrase subsequently. How can lignite been chosen as an alternative. This alternative is not lucrative neither to the PP nor does it satisfy the sustainability issue by replacing baseline fuel (coal). Elimination of alternatives is not convincing	4.2

	and justifiable.	
Date: [Response from project developer] The additionality has been established Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions; The project activity additionality is primarily based on Levelised unit cost analysis with different plausible alternatives available with AML before project implementation. After investment analysis it was found that coal based steam generation was least and would have been the best plausible alternative for steam generation. Even then project activity with higher investment and higher unit cost of operation for steam generation was selected. This clearly proves project additionality		
Date: [12/06/2007] [Jimmy Sah][Comments from Local Assessor] The project additionality has been mentioned under section B.5 and is acceptable.		
[Acceptance and close out] OK Sanjeev Kumar [12/06/2007]		

Date: 06/03/2007 Raised by: Rama

No.	Issue	Ref
2.5	Project has no Barriers. Seem to be like the project doesn't have any other barrier other than the availability of biomass. Even that can be excluded, because the PP had contradicted that by considering the 365days of operating hours for emission reductions calculations, which means biomass is available throughout the year, hence no barrier. Justify?	4.2
Date: [Response from project developer] Barriers related to biomass are sufficiently described in section B.5.		
Date: [12/06/2007] [Comments from Local Assessor] Barriers for the project activity have been discussed under section 3.2 of this document.		
[Acceptance and close out] OK Sanjeev Kumar [12/06/2007]		

Date: 06/03/2007 Raised by: Rama

No.	Issue	Ref
2.6	PP should consider project emissions though negligible. Address project emissions w.r.t. to the transport of emissions from 1. combustion of fossil fuels for transportation of biomass residues to the project plant 2. any Carbon dioxide emissions from on-site consumption of fossil fuels 3. Methane emissions from combustion of biomass residues In case (1): this cannot be neglected because the biomass residues in absence of this project wouldn't be utilized. The project activity creates the transportation of biomass residues to the plant, wherein in absence of this project this would not have happened. Hence this should be included in the project boundary and as well to be considered for project emissions. Justify (2) and (3)	4.2
Date: [Response from project developer] For start up of boiler, some quantity of charcoal and diesel is required. These project emission have been considered in the emission reduction algorithm. Calculations for the same can be found in the emission reduction excel sheet provided to the validator.		

The biomass residue (DOC) undergoes complete combustion in the FBC furnace. Therefore the project activity foresees no methane emissions. Further the methodology does not require project proponent to consider methane emissions. Leakage due to transportation has not been considered as distance for baseline fuel (coal) transport would have been 400 kms. Whereas biomass transport from biomass supplier to AML project activity would have been 10kms. There would be positive leakage emissions from coal transport and therefore the leakages from biomass transport have been neglected.
Date: [12/06/2007] [Jimmy Sah][Comments from Local Assessor] The explanation provided by the project proponent is acceptable and hence leakage is not considered for the project activity.
[Acceptance and close out] OK Sanjeev Kumar [12/06/2007]

Date: 06/03/2007 Raised by: Rama

No.	Issue	Ref
2.7	Address and mention leakage w.r.t to Attachment C (information on leakage in biomass project activities	4.2

Date: [Response from project developer] Information on leakage is addressed in the revised PDD.
Date: [] [Comments from Local Assessor] The revised PDD mentions about no leakage from the project activity.
[Acceptance and close out] OK Sanjeev Kumar [12/06/2007]

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5 Validation opinion

SGS has performed a validation of the project: “Renewable biomass residue based steam generation at Arvind Mills, Santej”. 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 biomass residues as fuel in the FBC boiler will lead to displacement of fossil fuel which would have otherwise been used. Thus 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 barrier analysis involving investment barrier which mentions the levelized cost for steam generation and Other barriers due to biomass availability and biomass pricing associated with project activity, which 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 in the commissioning stage. The project will likely 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.

6 List of persons interviewed

Date	*Name*	*Position*	*Short description of subject discussed*
23/03/07	Mr. Shirishchandra Saraiya	Project proponent	Project additionality
23/03/07	Mr. Kalpesh J Patel	Shift incharge	Monitoring methodology for the project activity
23/03/07	Mr. Aditya Namjoshi	Project Consultant	Project baseline and additionality
23/03/07	Mr. Askami	Local stakeholder	Local stakeholder consultation
23/03/07	Mr. Mukesh	Local stakeholder	Local Stakeholder consultation

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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/	Letter of Approval from Host Country
/2/	Modalities of communication
/3/	PDD version 01 dated 22/11/2006
/4/	PDD version 02 dated 07/06/2007
/5/	Emission reduction calculation sheet
/6/	Levelized cost calculation Sheet

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/	Letter of Indent to Cethar vessels for project activity
/2/	Expenditure Approval form for CDM consideration
/3/	Consent from GPCB
/4/	Clearance from GPCB
/5/	Letter from boiler inspector
/6/	Letter of undertaking for no-use of ODA
/7/	Local Stakeholders intimation
/8/	GPCB comment as stakeholder
/9/	Summary of local stakeholder comments
/10/	Calibration certificates
/11/	No Natural Gas availability
/12/	Letter of Undertaking for no change in technology
/13/	Good management practice for boiler
/14/	Data on Production and yield of Castor and Groundnut
/15/	Training Certificates

Annex 1: Local Assessment

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
12.1. Host Country Approval (HCA) letter from Project Proponent.	PDD		The letter (reference number 4/23/2006-CCC) has been submitted and verified. The name on the HCA is the same as mentioned in the section A.1 of the PDD.	Y	Y
12.2. Undertaking from Project proponent regarding no ODA use.			The project proponent has submitted an undertaking which states that no ODA was used for the project activity.	Y	Y
12.3. Biomass availability for the project activity.			The project proponent has submitted a letter by Ardip agencies, the supplier for the biomass residues for the project activity and it mentions about the biomass being supplied. The Department of Agriculture & Co-operation publishes data regarding the production and yield of various agricultural products. The project proponent has submitted the data for Castor and Groundnut to mention the availability of biomass resuidues of the same.	Y	Y
12.4. Evidence for non availability for Natural Gas.			The project proponent has submitted a letter by Gujarat State Petronet which mentions that Natural Gas was available to Arvind Mills in December 2004 and that this is the first pipeline for the area.	Y	Y
12.5. Invitation for LSC meeting sent to local stakeholders.			The intimation letters to the employees has been submitted by the project proponent. This was cross-checked during the site visit and found acceptable.	Y	Y

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
12.6. The regulatory approval (consent to establish and operate the project) from the Pollution Control Board			The project proponent has submitted Consent and NOC from GPCB and Boiler inspector. Which have been checked and found acceptable	Y	Y
12.7. Purchase orders for the technology employed.			The letter of indent to Cethar Vessels has been submitted. And during the site visit the specifications as mentioned in the purchase orders have been checked and found ok.	Y	Y
12.8. MoM of board meeting in which CDM was considered for the project activity.			The project proponent has submitted an Expenditure approval form for the project activity dated 03/09/2001 in which the CDM funds were considered for the project activity.	Y	Y
12.9. Excel sheets regarding emission reduction calculation			The project proponent has submitted the excel sheets for emission reduction calculation and the same was checked for the values and assumptions and found ok.	Y	Y
12.10. Calibration certificates for equipments used for data monitoring			The calibration certificates for the project activity have been checked and found acceptable.	Y	Y
12.11. Quality Assurance (QA) and Quality Control (QC) procedures for data monitoring.			A Good monitoring practice procedure has been applied for the project activity. The same was cross checked with the personnel at the site and they were found to be aware of the procedures to be followed.	Y	Y
12.12. Training module / material used during training programme for the employees.			Training certificates by Cethar vessels has been provided for the project activity.	Y	Y

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
12.13. Evidence for no change of technology during the crediting period.			The project participant has submitted a letter of undertaking that the technology will not be changed during the crediting period.	Y	Y
12.14. Justification for the delay to approach CDM benefits.			The project proponent mentioned that they were not aware of the procedures to be followed to get the project registered as a CDM project. This was checked during discussion with the project proponent.	Y	Y
12.15. Modalities of Communication for the project activity.			The project proponent has submitted the letter for Modalities of communication for the project activity has been submitted.	Y	Y

Annex 2: Validation Protocol

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 reduce GHG emissions; however no Annex-1 Party has been identified by the project proponent so far.	Y	Y
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 will contribute to sustainable development. Host Country Approval from Designated National Authority is to be provided by the project proponent.	CAR 1	Y CAR1 closed
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/ UNFCCC Web-site	DR/ UNFCCC Web-site	India has ratified the protocol on 26th August 2002 and is allowed to participate. (http://unfccc.int/parties_and_observers/parties/items/2109.php)	Y	Y
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 results in reduction of CO_2 emissions by replacing conventional fossil fuel by Biomass.	Y	Y
1.5 Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for	PDD	DR/ UNF	Yes, the project is listed on UNFCCC website from 06th Feb 2007 to 07th Mar 2007 and was	Pending	Y Stakehold

REQUIREMENT	Ref	MoV	Comment	Draft finding	Final Concl
minimum 30 days (45 days for AR projects), and the project design document and comments have been made publicly available.		CCC Web -site	linked to SGS's climate change program link as given below. The project was also listed on SGS climate change website from 06th Feb 2007 to 07th Mar 2007. http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=205 Number of comments received during web-hosting period - 02		ers comments closed.
1.6 The project has correctly completed a Project Design Document, using the current version and exactly following the guidance.	PDD	DR	The guidelines for completing the PDD as per version 03 has been followed , except some pending closure of CARs and NIRs	Pending	Y All CARs/ NIRs are closed
1.7 The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA.	PDD	DR	ODA is not Utilized, nor does it result in diversion of such ODA. Proof of which is to be obtained by the project proponent.	NIR 2	Y NIR 2 closed
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	PDD	DR	This is an SSC project which comes under category AMS I-C and hence table 9 is applicable.	Pending	Y All CARs/ NIRs are

REQUIREMENT	Ref	MoV	Comment	Draft finding	Final Concl
Table 10 for AR projects Table 11 for AR SSC projects					closed
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 PDD for the present project activity is complete and it does reflect the all the required information clearly except closure of pending CARs / NIRs	Pending	Y All CARs/ NIRs are closed
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner?	PDD	DR	Pending CARs / NIRs	Pending	Y All CARs/ NIRs are closed

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 E) All CDM Project Activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
7.1 Have relevant stakeholders been consulted?	PDD	DR	Yes, the relevant stakeholders have been consulted and mentioned in the PDD. To be checked during site visit.	Site visit	Y Evidence provided
7.2 Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	The media used to communicate with the local stakeholder in concern of receiving their comments on the project activity is not described in the PDD. Evidence is required to be submitted by the project proponent in this concern.	NIR 3	Y NIR 3 closed
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. Evidence needs to be checked during site visit	Site visit	Y Evidence provided
7.4 Is a summary of the stakeholder comments received provided?	PDD	DR	The summary of stakeholder comments is provided, to be checked during site visit.	Site visit	Y Evidence provided
7.5 Has due account been taken of any stakeholder comments received?	PDD	DR	No negative comments received. To be checked during site visit.	Site visit	Y Evidence provided

Table 8 Other requirements All CDM project activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.1 Project Design Document					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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	Table numbering in the PDD is not proper. Kindly check.	CAR 4	Y CAR 4 closed
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	PDD does not respond the issues under Column A.4. PDD refers to Section D.2.1 for details on page 19, but no such section is mentioned in the PDD.	CAR 5	Y CAR 5 closed
8.2 Technology to be Employed					
8.2.1 Does the project design engineering reflect current good practices?	PDD	DR	The project design reflects current good practices. Same is required to be checked from the purchase order copy for the present project activity.	NIR 6	Y NIR 6 closed
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 technologies in the host country?	PDD	DR	The project activity uses a proven technology for production of steam by using biomass as a fuel. Evidence needs to be checked during the site visit.	Site visit	Y Evidence provided
8.2.3 Is the project technology likely to be substituted by other or more efficient technologies within the project period?	PDD	DR	Project technology will not be substituted by other or more efficient technologies during the crediting period. Evidence needs to be provided by the project proponent.	NIR 7	Y NIR 7 closed
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 PDD does not discuss about the requirements of initial training and maintenance efforts.	NIR 8	Y NIR 8 closed

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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	The starting date of the project is clearly mentioned but the proof of the same is to be obtained by the project proponent. The operational lifetime is clearly defined as 30 years.	NIR 9	Y NIR 9 closed
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	The assumed crediting time is clearly defined as 10 years. It is fixed crediting period which is selected and it is reasonable.	Y	Y
8.3.3 Does the project's operational lifetime exceed the crediting period.	PDD	DR	The projects operational lifetime is of 30 years this exceeds the crediting period of 10 years.	Y	Y

Table 9 Additional requirements for SSC project activities only

CHECKLIST QUESTION	Ref.	Mo V*	COMMENTS	Draft Concl	Final Concl
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 is Renewable biomass based steam generation at Arvind mills, Santej. The energy output from the project activity is less than 45 MW_{th} as mentioned in the PDD. It qualifies as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP .7. The exact energy output from the project activity is not mentioned.	NIR 10	Y NIR 10 closed
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 I-C version 09, 23 December 2006	Y	Y
9.3 The small scale project activity is not a debundled component of a larger project activity?	PDD	DR	The Small scale project activity is not a debundled component of a larger project as mentioned in the PDD. Evidence for the same needs to be checked during the site visit.	Site Visit	Y Evidence provided
9.4 PDD has been prepared in accordance with appendix A of Annex II to Decision 21/CP8	PDD	DR	The PDD has been prepared in accordance with the template (version 04) except for some pending CARs/NIRs	Pending	Y All CARs/ NIRs closed
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	The project uses simplified baseline and monitoring methodology AMS – 1C version 09, 23 December 2006.	Y	Y

CHECKLIST QUESTION	Ref.	Mo V*	COMMENTS	Draft Concl	Final Concl
9.6 Are the emission reductions determined in accordance with the methodology described?	PDD	DR	The Excel spreadsheet for emission reduction calculations needs to be provided by the project proponent. Justification is needed why the value for NCV of coal has been used as 5000 Kcal/kg, though the PDD mentions use of IPCC values which is 3600 Kcal/kg.	NIR 11	Y NIR 11 closed
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	NO bundling of SSC activities into one PDD.	Y	Y
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	The PDD does not discuss whether EIA has been carried or not for the present project activity. Provide a copy of Site clearance certificate from Gujarat State Pollution Control Board.	CAR 12	Y CAR 12 closed
9.9 The project results in emission reductions that are additional in accordance with the following requirements: (Para 26) The project is additional if emissions are reduced below those in the absence of the project.	PDD	DR	The Project uses biomass in the project activity as a fuel to produce steam, but it is not mentioned what fuel was used to produce steam before the project activity came into existence.	CAR 13	Y CAR 13 closed

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CHECKLIST QUESTION	Ref.	Mo V*	COMMENTS	Draft Concl	Final Concl
(Para 27) Simplified baseline can be used; if not, baseline proposed shall cover all gases, sectors and sources listed in Annex A to the KP			The baseline selected is not clear as per AMS 1C.	CAR 14	Y CAR 14 closed
(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			• Proof is required for non availability of Natural Gas. • Source referred to reach the Steam generation cost is required. • Evidence is required for how the figure of 21840 MT of biomass is required has been calculated. • Evidence is required for the upward trend in the pricing of biomass. • Comparison of Investment required for all the four alternatives are not shown in the PDD. • Technological Barriers are not discussed in the PDD, if any. • What is the common practice followed in the region in the similar type of industries. • Are there any regulations that required or encouraged to go for Biomass Residue based steam generation. • Justify why CDM benefits were not approached since the start date of the project activity. • How CDM revenue will benefit and to what extent it will effect the project is not discussed in the PDD.	CAR 15	Y CAR 15 closed

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CHECKLIST QUESTION	Ref.	Mo V*	COMMENTS	Draft Concl	Final Concl
			• Proof is required that CDM benefit was considered before the installation of the project activity.		
9.10 Leakage is calculated according to the provisions of the SSC methodologies in Appendix B.	PDD	DR	Leakage due to transport of biomass is not discussed. Consider the same.	CAR 16	Y CAR 16 closed
9.11 The project boundary shall be constructed in accordance with the requirements of the SSC meths in Appendix B.	PDD	DR	The project boundary is not clear as per the PDD. It is not described in which process do they require steam and how much. Leakage is not considered in the boundary	CAR 17	Y CAR 17 closed
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	Monitoring of leakage needs to be considered.	NIR 18	Y NIR 18 closed
9.13 The monitoring plan shall present good monitoring practice appropriate to the circumstances of the project activity.	PDD	DR	Provide a copy of calibration certificates for the equipments used for measurement purpose. Copy of QA and QC procedure regarding project activity. Records of Training programme carried out for the project activity.	NIR 19	Y NIR 19 closed
9.14 If project activities are bundled,	PDD	DR	No, the project is not a bundled project activity.	Y	Y

CHECKLIST QUESTION	Ref.	Mo V*	COMMENTS	Draft Concl	Final Concl
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.					

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

Annex 3: Overview of Findings

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
1	CAR	Host Country approval by the Indian DNA is to be provided by the project proponent.	1.2
Date: 22/05/2007 [A copy of the Host Country Approval has been submitted to the validator]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The letter (reference number 4/23/2006-CCC) has been submitted and verified. The name on the HCA is the same as mentioned in the section A.1 of the PDD.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
2	NIR	The project proponent is required to provide evidence for no ODA use for project activity.	1.7
Date: 22/05/2007 [The validator has been provided with the AML undertaking, which states that no ODA has been utilized for the project]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] A letter of undertaking which states that no ODA was used for the project activity has been submitted by the project proponent. NIR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
3	NIR	The media used to communicate to the local stakeholders for the CDM project activity is to be provided by the project proponent.	7.2
Date: 22/05/2007 [Intimation to stakeholders and comment summary has been included in the revised PDD. Intimation and stakeholder comments copy is submitted to validator]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The intimation letter to the employees of Arvind mills has been submitted by the project proponent it mentions about individual comments and feedback to be taken between 19-08-2002 and 30-08-2002; this is the same as that mentioned in the PDD. This was cross-checked during the interaction with the stakeholders during the site visit. NIR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref

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4	CAR	Table B.6.4 in the PDD is not according the CDM-SSC template.	8.1.1
Date: 22/05/2007 [Table B.6.4 is revised in the PDD as per SSC CDM version 03, 23 December 2006 format]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The table 6.4 in the revised PDD is as per the template. CAR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
5	CAR	The issues under the header A.4 are not addressed. Section D.2.1 was not found, as referred in the PDD.	8.1.2
Date: 22/05/2007 [Point A.4 has been explained under point A.4.2 with technology implemented in the project activity. D.2.1 does not exists in the revised version of SSC PDD format]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The PDD under the section A.4.2 mentions the technological details for the project activity. The Rephrased version of the PDD does not refer D.2.1. CAR can be closed			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
6	NIR	Purchase orders for various equipment related to the project activity are required to check as evidence for the technological specifications as mentioned in the PDD.	8.2.1
Date: 22/05/2007 [A copy of Purchase order of different equipments installed in the project activity has been submitted to the validator.]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The purchase orders for the project activity have been submitted and the specifications mentioned in the Purchase orders matches with that in the PDD. NIR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
7	NIR	Project proponent needs to provide evidence that the technology used in the project activity will not be changed during the crediting period.	8.2.3
Date: 22/05/2007 [An undertaking from the authorised personnel of project proponent for NO change in project activity technology has been provided to the validator.]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The project proponent has submitted a letter of undertaking which states that the technology for the project activity will not be changed during the crediting period. NIR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

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No.	Type	Issue	Ref
8	NIR	The PDD does not discuss about requirements for initial training. The project proponent requires submitting the evidence for the same.	8.2.4
Date: 22/05/2007 [The revised PDD discusses about the training provided for Boiler operation. (Please refer to Section A.4.2) and evidence of the same has been provided to the validator.]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The requirements of training for the project activity have been provided by Cethar vessels limited, which had supplied the boiler for the project activity. This is acceptable, NIR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
9	NIR	The project proponent needs to provide evidence for the start date of the project activity.	8.3.1
Date: 22/05/2007 [A copy of Indent letter has been provided to the validator to denote start date of the project activity]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The copy of Indent letter has been submitted and the date mentioned is 13th September 2001, the same as mentioned under the section C.1.1 of the PDD. NIR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
10	NIR	The energy output from the project activity is not mentioned in the PDD. Proof for the same is required.	9.1
Date: 22/05/2007 [The energy output of the project activity is 11.4 MW which is less than 15 MW. The same is referred in B.2 of PDD. Calculation on the energy output can be found in the emission reduction excel sheet attached separately]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The PDD under the section B.2 mentions the energy output from the project activity as 11.4 MW. The calculations for the same have been checked and found ok. NIR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
11	NIR	The project proponent need to provide the excel sheet for estimation of emission reductions. The PDD mentions the use of IPCC values for NCV of coal which is 3600 Kcal/kg, but the value used to calculate the emission reductions is 5000 Kcal/kg. Justification is needed for the same.	9.6
Date: 22/05/2007 [The excel sheet on the estimation of emission reductions has been provided. The revised PDD uses GCV of coal for all estimations. The GCV test report of coal has been provided to the validator as evidence.]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor]			

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For calculation of baseline emission GCV value of coal has been used, but for calculation of project emissions NCV values have been used. Kindly use NCV values at both the places.
Date: 31/05/2007 [The revised PDD, emission reduction calculation and levelised unit cost calculation incorporates NCV values.]
Date: [11/06/2007] [Jimmy Sah] [Comments from Local Assessor] The revised PDD and the excel sheets for calculating the emission reductions utilize the NCV value of 4498 kcal/kg as specified by IPCC, this is acceptable. NIR can be closed.
[Acceptance and close out] OK, Sanjeev Kumar [11/06/2007]

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
12	CAR	Provide details whether EIA has been carried or not. Submit the site clearance certificate from GPCB. Consent and Authorization to Operate form GPCB. Clearance from Office of the Chief Inspector of Steam Boilers and Smoke Nuisance	9.8
Date: 22/05/2007 [EIA was not applicable for the project activity. Necessary proofs for Site clearance, Consent and Authorization operate and Certificate from Office of Chief inspector of Steam Boiler and smoke nuisance has been provide to the validator]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The project proponent has submitted the Site clearance certificate; Consent to operate by GPCB and Certificate from Gujarat Boiler Inspection Department. The certificates have been checked and found ok. CAR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
13	CAR	It is not mentioned which fuel was used to produce steam before the project activity was installed. Provide evidence for the same.	9.9
Date: 22/05/2007 [The revised PDD mentions baseline alternatives and plausible fuel alternatives in absence of the project activity. Proof for the same has been provided to the validator]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The PDD version 1 under the section B.2 mentioned that “The project activity entails replacing old unit for more efficient unit” but the fuel used was not provided, kindly clarify the same.			
Date: 31/05/2007 [The FBC boiler project activity is a new project activity and does not involve any replacement or old unit.			
Date: [11/06/2007] [Jimmy Sah] [Comments from Local Assessor] It was checked during site visit that the present project activity is a newly installed activity and it uses biomass residue as fuel to generate steam for the production facility. CAR can be closed			
[Acceptance and close out] OK, Sanjeev Kumar [11/06/2007]			

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Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
14	CAR	The PDD mentions the baseline and emission reductions calculations from the project would be based on paragraph 6 and 7 of 1. C of Appendix B. Justification is needed for the same	9.9
Date: 22/05/2007 [Justification for CAR 14 has been provided in form of emission reduction calculations excel sheet and has been provided to the validator.]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The emission reduction calculation uses GCV values of coal for calculating the baseline emission, while NCV values are used to calculate the project emissions, kindly use NCV values.			
Date: 31/05/2007 [We have used NCV values for fuels used in the project activity emission reduction and unit cost calculation.]			
Date: [11/06/2007] [Jimmy Sah] [Comments from Local Assessor] The revised excel sheet uses the NCV values as provided by IPCC 2006 guidelines for calculating emission reductions which is acceptable.			
[Acceptance and close out] OK, Sanjeev Kumar [11/06/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
15	CAR	• Proof is required for non availability of Natural Gas in the region. • Source referred to reach the Steam generation cost for coal, furnace oil and biomass residue is required. • Evidence is required for how the figure of 21840 MT of biomass is required for the project activity has been calculated. • Evidence is required for the upward trend in the pricing of biomass. • Comparison of Investment required for all the four alternatives are not shown in the PDD. • Technological Barriers are not discussed in the PDD, if any. • What is the common practice followed in the region in the similar type of industries. • Are there any regulations that required or encouraged to go for Biomass Residue based steam generation. • Justify why CDM benefits were not approached since the start date of the project activity. • How CDM revenue will benefit and to what extent it will effect the project is not discussed in the PDD. • Proof is required that CDM benefit was considered before the installation of the project activity.	9.9
Date: 22/05/2007			

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- Proof is required for non availability of Natural Gas in the region.

Proof for non availability of Natural Gas in the region has been provided by the project proponent to the validator.

- Source referred to reach the Steam generation cost for coal, furnace oil and biomass residue is required.

Levelized unit steam cost calculations along with the necessary Boiler supplier/vendor evidence documents have been provided to the validator.

- Evidence is required for how the figure of 21840 MT of biomass is required for the project activity has been calculated.

The biomass quantity of 21,840 MT/annum was an estimated value during the initial phase of biomass calculation before the project activity implementation. The emission reduction calculation will be based on actual and monitored consumption of biomass residue ie; DOC in the project activity. The actual biomass consumption value for the year 2006-2007 has been provided to validator.

- Evidence is required for the upward trend in the pricing of biomass.

Proof of biomass residue upward trend analysis has been provided to the validator.

- Comparison of Investment required for all the four alternatives are not shown in the PDD.

The levelized unit cost analysis has been carried out for three alternatives ie; FO, coal and biomass. Detailed quotation copy of three alternatives along with the levelized unit steam cost analysis considered in the Baseline for investments has been provided to the validator along with data source for each levelized unit cost analysis

- Technological Barriers are not discussed in the PDD, if any.

There are no Technology barrier associated with the project activity

- What is the common practice followed in the region in the similar type of industries.

Common practise followed in the region and in the similar type of industries for steam generation is coal

- Are there any regulations that required or encouraged to go for Biomass Residue based steam generation.

Not applicable with reference to Gujarat Pollution control board.

- Justify why CDM benefits were not approached since the start date of the project activity.

The project proponent was not aware of the procedures to be adopted in order to get the project registered.

- How CDM revenue will benefit and to what extent it will effect the project is not discussed in the PDD.

Please refer to the last paragraph of Section B.5.

- Proof is required that CDM benefit was considered before the installation of the project activity.

Proof (Board approval and capex approval sheet) on the CDM Consideration for the project activity has been provided to the validator]

Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor]

- Proof is required for non availability of Natural Gas in the region.

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- Source referred to reach the Steam generation cost for coal, furnace oil and biomass residue is required.

Excel sheets for levelized unit steam cost calculations have been provided and it has been checked for the calculations and assumptions. GCV values of coal has been used instead of NCV, kindly clarify the same.

- Evidence is required for how the figure of 21840 MT of biomass is required for the project activity has been calculated.

The actual biomass consumption value for the year 2005-2006 has been used which is acceptable.

- Evidence is required for the upward trend in the pricing of biomass.

Kindly provide the proof for the same.

- Comparison of Investment required for all the four alternatives are not shown in the PDD.

The levelized unit cost analysis has been carried out for three alternatives ie; FO, coal and biomass. Detailed quotation copy of three alternatives along with the levelized unit steam cost analysis considered in the Baseline for investments has been provided along with data source for each levelized unit cost analysis, this is acceptable.

- Technological Barriers are not discussed in the PDD, if any.

There are no Technology barrier associated with the project activity, this was checked during the site visit and found acceptable.

- What is the common practice followed in the region in the similar type of industries.

Common practise followed in the region and in the similar type of industries for steam generation is coal, kindly provide an evidence for the same.

- Are there any regulations that required or encouraged to go for Biomass Residue based steam generation.

Not applicable with reference to Gujarat Pollution control board.

- Justify why CDM benefits were not approached since the start date of the project activity.

The project proponent was not aware of the procedures to be adopted in order to get the project registered. This was checked by discussion with the project proponent

- How CDM revenue will benefit and to what extent it will effect the project is not discussed in the PDD.

The PDD under section B.5 mentions the benefits associated with CDM funds.

- Proof is required that CDM benefit was considered before the installation of the project activity.

The project proponent has submitted a letter for Expenditure Approval form dated 03/09/2001 which mentions about the requirement for CDM funds for the project activity.

- Date: 31/05/2007 [Proof is required for non availability of Natural Gas in the region.

Evidence for Non availability of Natural gas has been enclosed with the document.

- Source referred to reach the Steam generation cost for coal, furnace oil and biomass residue is required.

Excel sheets for levelized unit steam cost calculations have been provided and it has been checked for the calculations and assumptions. GCV values of coal has been used instead of

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NCV, kindly clarify the same.
Only NCV values are used for calculation

- Evidence is required for the upward trend in the pricing of biomass.

Kindly provide the proof for the same.

Find enclosed evidence for upward trend in the pricing of biomass

- What is the common practice followed in the region in the similar type of industries.

Common practise followed in the region and in the similar type of industries for steam generation is coal, kindly provide an evidence for the same.

Find enclosed a list of industries in the near by region where coal is primarily used for stema generation.]

Date: [11/06/2007] [Jimmy Sah] [Comments from Local Assessor]

- Proof is required for non availability of Natural Gas in the region.

The project proponent has submitted a letter by Gujarat State Petronet which mentions that Natural Gas was available to Arvind Mills in December 2004 and that this is the first pipeline for the area.

- Source referred to reach the Steam generation cost for coal, furnace oil and biomass residue is required. Excel sheets for Levelized unit steam cost calculations have been provided and it has been checked for the calculations and assumptions. GCV values of coal has been used instead of NCV, kindly clarify the same.

The project proponent has used NCV values as specified by IPCC guidelines 2006 and this is acceptable.

- Evidence is required for the upward trend in the pricing of biomass. Kindly provide the proof for the same.

The project proponent has the submitted the DOC price trend for the project activity. This is acceptable.

- What is the common practice followed in the region in the similar type of industries.

The project proponent has submitted a list of industries nearby the project area. The common practice followed is use of fossil fuel in the nearby areas.

[Acceptance and close out] OK, Sanjeev Kumar [11/06/2007]

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
16	CAR	Leakage due to transport of biomass is not calculated. Provide the details from what distance is the biomass for the project activity being procured and what is the means of transport.	

Date: 22/05/2007
[Leakage due to transportation has not been considered as distance for baseline fuel (coal) transport would have been 400 kms. Whereas biomass transport from biomass supplier to AML

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project activity would have been 10kms. There would be positive leakage emissions from coal transport and therefore the leakages from biomass transport have been neglected]
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] For leakages due to transport of fuel, the GHG emissions in the baseline scenario i.e. coal would have been more than that in the project scenario i.e. biomass, hence leakages from biomass transport can be neglected for the project activity.
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
17	CAR	The project boundary does not describe where the steam generated form the project activity is consumed.	9.11
Date: 22/05/2007 [The steam generated from biomass residue (DOC) is used for in house consumption for textile manufacturing only.]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The rephrased version of the PDD mentions that Steam will be used in the AML textile operations and is acceptable.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
18	NIR	Monitoring of leakage is not included in the PDD. Justification for the same is required.	9.12
Date: 22/05/2007 [Monitoring of leakages (transport) is neglected and justification for same is provided in revised PDD. However project emissions in form of boiler start up fuel though negligible will be monitored and calculations for same have been incorporated in the emission reduction calculation sheet and in revised PDD.]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] Monitoring of leakage due to transport of biomass is neglected as the GHG emissions in the baseline scenario i.e. coal would have been higher as they would be transported for 600 kms as compare to the project scenario i.e. biomass which is transported for 10 kms. The PDD under section B.6.2 mentions the monitoring of Diesel and Charcoal used for the project activity. This is acceptable.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Date: 13/02/2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
19	NIR	Provide a copy of calibration certificates for the equipments used for measurement purpose. Copy of QA and QC procedures regarding the project activity.	9.13

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		Records of Training programme carried out	
Date: 22/05/2007 [Copy of calibration certificates, QA and QC procedures and Training programme records have been provided to the validator.]			
Date: [30/05/2007] [Jimmy Sah] [Comments from Local Assessor] The copy of calibration certificates for the project activity has been submitted and found acceptable. The training requirement has been provided by Cethar vessels the supplier of boiler for the project activity. A copy of Good monitoring practices followed for the project activity has been submitted which was cross-checked during site visit and the persons operating the boiler were found to be aware of the procedures laid down. NIR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar [30/05/2007]			

Annex 4: Statement of Competence of Validation Team

Statement of Competence

Name: Sanjeev Kumar SGS Affiliate: SGS India Pvt. Ltd.

Status

- Product Co-ordinator ☐
- Operations Co-ordinator ☐
- Technical Reviewer ☐
- Expert ☒

	Validation	Verification
- Local Assessor	☒	☒
- Lead Assessor	☒	☒
- Assessor /Trainee Lead Assessor	☐	☐

Scopes of Expertise

1. Energy Industries (renewable / non-renewable) ☒
2. Energy Distribution ☒
3. Energy Demand ☒
4. Manufacturing ☒
5. Chemical Industry ☐
6. Construction ☐
7. Transport ☐
8. Mining/Mineral Production ☐
9. Metal Production ☐
10. Fugitive Emissions from Fuels (solid,oil and gas) ☐
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride ☐
12. Solvent Use ☐
13. Waste Handling and Disposal ☐
14. Afforestation and Reforestation ☐
15. Agriculture ☐

Approved Member of Staff by Siddharth Yadav Date: 16th May 2007

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Statement of Competence

Name: Vikrant Badve SGS Affiliate: SGS India Pvt. Ltd.

Status

- Product Co-ordinator ☐
- Operations Co-ordinator ☐
- Technical Reviewer ☐
- Expert ☒

	Validation	Verification
- Local Assessor	☒	☒
- Lead Assessor	☐	☐
- Assessor / Trainee Lead Assessor	☐	☐

Scopes of Expertise

1. Energy Industries (renewable / non-renewable) ☒
2. Energy Distribution ☒
3. Energy Demand ☒
4. Manufacturing ☒
5. Chemical Industry ☐
6. Construction ☒
7. Transport ☐
8. Mining/Mineral Production ☐
9. Metal Production ☐
10. Fugitive Emissions from Fuels (solid,oil and gas) ☐
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride ☐
12. Solvent Use ☐
13. Waste Handling and Disposal ☐
14. Afforestation and Reforestation ☐
15. Agriculture ☐

Approved Member of Staff by Marco van der Linden Date: 29-12-06

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Statement of Competence

Name: Jimmy Sah SGS Affiliate: SGS India Pvt. Ltd.

Status

- Product Co-ordinator ☐
- Operations Co-ordinator ☐
- Technical Reviewer ☐
- Expert ☒

	Validation	Verification
- Local Assessor	☒	☐
- Lead Assessor	☐	☐
- Assessor / Trainee Lead Assessor	☐	☐

Scopes of Expertise

1. Energy Industries (renewable / non-renewable) ☒
2. Energy Distribution ☐
3. Energy Demand ☐
4. Manufacturing ☐
5. Chemical Industry ☐
6. Construction ☐
7. Transport ☐
8. Mining/Mineral Production ☐
9. Metal Production ☐
10. Fugitive Emissions from Fuels (solid,oil and gas) ☐
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride ☐
12. Solvent Use ☐
13. Waste Handling and Disposal ☐
14. Afforestation and Reforestation ☐
15. Agriculture ☐

Approved Member of Staff by Siddharth Yadav Date: 23-05-07

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Registered in England No. 1193985 Rossmore Business Park, Ellesmere Port, Cheshire CH65 3EN

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Statement of Competence

Name: Dr. Jochen Gross SGS Affiliate: SGS Germany GmbH

Status

- Product Co-ordinator	☐	
- Operations Co-ordinator		☐
- Technical Reviewer	☒	
- Expert	☒	

	Validation	Verification
- Local Assessor	☒	☒
- Lead Assessor	☒	☒
- Assessor / Trainee Lead Assessor	☒	☒

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	☒
2. Energy Distribution	☐
3. Energy Demand	☐
4. Manufacturing	☒
5. Chemical Industry	☐
6. Construction	☐
7. Transport	☐
8. Mining/Mineral Production	☐
9. Metal Production	☒
10. Fugitive Emissions from Fuels (solid,oil and gas)	☐
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	☐
12. Solvent Use	☐
13. Waste Handling and Disposal	☐
14. Afforestation and Reforestation	☐
15. Agriculture	☐

Approved Member of Staff by Siddharth Yaddav Date: 16 May 2007

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