VALIDATION REPORT

Bannari Amman Sugars Limited

20 MW Bagasse based Cogeneration power project at Bannari Amman Sugars Limited, Sathyamangalam, Tamil Nadu.

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Project Title:	Organisational Unit:
20MW Bagasse based cogeneration power project at Bannari Amman Sugars Limited, Sathyamangalam, Tamil Nadu.	SGS Climate Change Programme
Revision Number:	Client:
2	Bannari Amman Sugars Limited

Summary:

SGS United Kingdom Ltd. has made a validation of the CDM project activity "20MW Bagasse based cogeneration power project at Bannari Amman Sugars Limited, Sathyamangalam, Tamil Nadu" by Bannari Amman Sugars Limited, 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 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 validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications plan and/or corrective actions may provide input for improvement of the project design document (PDD).

The overall validation process, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (UK.PP.12 issue 2 dated 01/07/2005).

The first output of the validation process is a list of Corrective Actions Requests and New Information Requests (CAR and NIR), presented in Annex 2 of this document. Taking into account this output, the project proponent revised its project design document.

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:		**Indexing Terms**
CDM Validation		
Validation Team Members:		
Pankaj Mohan – Lead Assessor		
Technical Review:		☒ No Distribution (without permission from the Client or responsible organisational unit)
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Authorized Signatory:		☐ Limited Distribution
Siddharth Yadav		
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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CO_2	Carbon Dioxide
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EIA	Environment Impact Assessment
GHG	Green House Gas(es)
I	Interview
IPCC	Intergovernmental Panel on Climate Change
ISHC	International Stakeholder Consultation
kWh	Kilo Watt hour
LSC	Local Stake holder consultation
MNES	Ministry of Non Conventional Energy Sources
MoEF	Ministry of Environment and Forest
MoV	Means of Verification
MP	Monitoring Plan
MWh	Mega Watt hour
MT	Metric Tonne
NIR	New Information Request
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
TNPCB	Tamil Nadu Pollution control board
UNFCCC	United Nations Framework Convention for Climate Change

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1. Introduction

1.1 Objective

Bannari Amman Sugars Limited has commissioned SGS to perform the validation of the project: 20 MW Bagasse based Cogeneration power project at Bannari Amman Sugars Limited, Sathyamangalam, Tamil Nadu 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 bagasse based cogeneration project at Bannari Amman Sugars Limited (BASL). The power is being generated by using bagasse as a fuel. The project is still in commissioning stage.

Baseline Scenario:

The electricity generated by project activity would have otherwise been generated by Southern Regional grid which is predominantly fossil fuel based.

With Project Scenario:

The project activity is generating electricity using bagasse as fuel. There is no associated anthropogenic emission of greenhouse gases as the project activity could not use any amount of fossil fuel i.e. coal in power plant. The project displaces the power that would have otherwise been generated by Southern Regional grid which consists of power plants operating on a mix of hydro, nuclear and fossil fuels but are primarily fossil fuel based.

Leakage:

In this project activity the energy generating equipment was not transferred from another activity or the existing equipment was not transferred to another activity. So, no leakage is considered.

Environmental & Social Impacts:

According to assessor, there is no negative environmental and social impact reported or seen from project activity during the site visit or during the local stakeholder consultation carried out as a validation protocol.

1.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Pankaj Mohan	Lead Assessor	SGS India

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.

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 was missing so CAR01 was raised. The project proponent provided the letter dated 28th February 2005; issued by the Indian DNA (reference number 4/10/2003-CCC) has been provided by the client which was verified from the original copy during the site visit. Hence CAR01 was closed out.

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.

CAR02 was raised to get the modalities of communication from the project proponent. The PP replied by providing the modalities of communication dated 25-09-2007 which was checked with the revised PDD and it was found that it was matching and hence this was accepted and CAR02 was closed out.

3.2 Baseline Selection and Additionality

The project activity basically employs the generation of power by using bagasse as fuel and using Approved consolidate methodology ACM0006 version 4. According to methodology the project activity fits into the baseline scenario 14. This was checked that the baseline scenario 14 is applicable for the project activity and also the selected baseline is the most plausible baseline scenario.

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CAR13 was raised to get the clarification on the discussion of baseline in the PDD. This is not transparently described in the PDD and also the discussions shows as if the project activity resulted due to increase in sugar capacity. The PP replied by providing the revised PDD mentioning the discussion on baseline selection transparently and also providing the documentary evidence of baseline selected. The revised PDD was checked and found to be in order and mentions the baseline clearly and transparently. The baseline is checked as per ACM0006 version 4. This was accepted and hence CAR13 was closed out.

CAR14 was raised as the PDD was not mentioning the baseline scenario 14 correctly and it is not matching with the methodology ACM0006 version 4. The project proponent provided the revised PDD mentioning the baseline scenario 14 correctly. This was accepted after reviewing the same with the methodology ACM0006 version 4. This was accepted and hence CAR14 was closed out.

The additionality of the project was proved on the basis of barrier analysis. The barrier analysis is mentioned clearly and transparently in the PDD and the technological and other barrier (Policy barrier) mentioned in the PDD is used to demonstrate additionality as per tool of demonstration of additionality version 3.

CAR15 was raised to get the clarification on start date of project activity and get the evidence of decision making process for the project activity. The project participant replied by providing the revised PDD mentioning the discussion on additionality clearly as per tool of demonstration of additionality version 3. The PP also provided the proof of starting date as Purchase order of boiler and turbine with BHEL for the project equipment. This was checked that the revised PDD is mentioning the discussion on additionality clearly and the proof of start date was also checked and found that it is OK. Hence CAR15 was closed out.

CAR16 was raised on step 1 in which all the possible baseline scenarios were not mentioned clearly and transparently. The project proponent replied by providing the revised PDD mentioning all the possible baseline scenarios transparently and according to Tool of demonstration of additionality version 03. Hence CAR16 was closed out.

CAR17 was raised on step 3 of tool of demonstration of additionality. The evidences of technological & other barriers need to be provided. The PP responded by providing the revised PDD mentioning the barrier analysis clearly in section B.5 as per version 03 of tool of demonstration of additionality. The PP also provided the proof of technological barrier and other barriers were as under

- Proof that BASL's project activity is one of the first in the region which was shown from the Extracts from Ministry of Non-Conventional Sources (MNES) annual report of year 2002-03. Therefore the

performance and success of the technology was not well established. Also, there was no sufficient availability of trained and experienced manpower to operate the project activity.

- Proof that the technological barriers had materialised for the project activity – Copies of communication regarding technical problems encountered in the project
- Proof that BASL faced drought conditions and as a result shortage of biomass residues. For this, copy of documents showing that BASL had imported sugar for processing during these drought years is being submitted.

These were cross checked during the site visit and desk review of the documentary proofs were also carried out and it was found that the technological barrier letter between equipment supplier and PP is OK and mentions the problems faced in the project activity. The Ministry of Non-Conventional Energy Sources (MNES) is now known as Ministry of New and Renewable Energy (MNRE) Government of India annual report dated 2002 -2003 was checked and found that the extracts on page 11 & 14 of chapter 5 mentions that this is the one of the first high pressure system installed in the region. Based on the commissioning certificate which is of August 2002 this was concluded to be first of its kind for 87 ata pressure. The Communication between the PP and the Supplier BHEL was checked from the letters dated 26th July 2004, 27th July 2004 and subsequent analysis report for the technical problems dated 07-09-2004 and the letter dated 27-11-2004 from BHEL was also studied and found that the causes of failure and remedial measures were suggested by the Supplier BHEL. After checking the transformer failure minutes of meeting and test report dated 07-06-2004 between the BASL & Voltamp transformers private limited was also checked and found that the regular technical problems were occurring to the PP after installation of the project activity. The other barrier proof provided of drought was also studied.The invoice for import of sugar dated 27th February 2004 having invoice number S10403448 was checked and found to be OK. Hence CAR17 was closed out.

CAR18 was raised to get the clarification on common practise analysis along with the documentary evidences for the project activity. The PP provided the revised PDD mentioning the common practice analysis transparently and according to the tool of demonstration of additionality version 3. The PP also provided the proof of common practice as Annual report of MNES showing that the high pressure technology was not prevailing at the time of implementation of the project activity and Copy of documents showing the number of sugar mills in Tamil Nadu and the mills with power export. These were checked and found that the documentary evidence of step 4 provided are as per tool of demonstration and assessment of additionality version 3. This was accepted and hence CAR18 was closed out.

3.3 Application of Baseline Methodology and Calculation of Emission Factors

The baseline methodology applied for the project activity is ACM0006 version 4. This version 4 of ACM0006 was applicable from 2nd November 2006 to 17th May 2007 and the request for registration can be sent till 17th January 2008. The web link of UNFCCC site is as
http://cdm.unfccc.int/methodologies/DB/CHJ06TVYFYP0GJIOONOLGPSGZMCG3W/view.html
The methodology applicability was checked from the approved consolidated methodology ACM0006 version 4.
CAR19 was raised to get the clarification on baseline emission calculations. The PP provided the revised PDD and corrected formula as per methodology ACM0006 version 4. The PP also provided that the incremental energy generation in section B.6.3 of revised PDD. The revised PDD along with the excel sheet was reviewed and found that the baseline emission calculations are done according to the methodology ACM0006 version 4. Hence this was accepted and CAR19 was closed out.
CAR20 was raised to get the emission reduction calculation in the PDD which were not mentioned. The PP provided the revised PDD mentioning the calculations for emission reduction in the PDD. The revised PDD provided was reviewed and found that the PDD is in order and hence this was accepted and CAR20 was closed out.
CAR21 was raised to get the emission reduction calculation in the PDD which were not mentioned. The PP provided the revised PDD mentioning the calculations for emission reduction in the PDD. The revised PDD provided was reviewed and found that the PDD is in order and hence this was accepted and hence CAR21 was closed out.
CAR22 was raised to get the clarification on not mentioning of baseline scenario in section B.6.1 of PDD and also the baseline emission factor calculation is not mentioned in section B.6.1 of PDD. The project proponent replied by providing the revised PDD mentioning the baseline scenario and also mentioning that the baseline

emission factor is from central electricity authority database. The PP also included the web-link in Annex 3 of the revised PDD. This was checked and accepted. Hence CAR22 was closed out.
CAR23 was raised to get the clarification on uncertainty in GHG emission reductions. The project proponent provided the revised PDD mentioning the uncertainty of each parameter used in the calculation of GHG emission reductions. This was mentioned in section B.6.1 of the PDD. The revised PDD received was reviewed and found that section B.6.1 of revised PDD is mentioning the uncertainty for each parameter used in the calculation of emission reductions. This was accepted and hence CAR23 was closed out.
NIR26 was raised to get the emission reduction calculation sheet. The PP provided the same which was reviewed and found to be in order and hence NIR26 was closed out.
The baseline emission factor used is 0.85 tCO2/MWh as per CEA version 3 data.

3.4 Application of Monitoring Methodology and Monitoring Plan

The monitoring methodology applied for the project activity is from methodology ACM0006 version 4 valid from 2nd November 2006 to 17th may 2007 and request for registration can be sent till 17th January 2008. The web link of UNFCCC site is as
http://cdm.unfccc.int/methodologies/DB/CHJ06TVYFYP0GJIOONOLGPSGZMCG3W/view.html
NIR24 was also raised to get the proofs for the values of the parameters mentioned for project emissions and leakage as per the methodology ACM0006 version 4. The PP provided the revised PDD elaborating more in section B.6.1 & B.6.3. The PP also provided the excel sheet of the calculations. The revised PDD was also checked along with excel sheet and found that it is OK. Hence this was accepted and NIR24 was closed out.
NIR25 was raised to get the information on sources of data for baseline emission, Project emission and leakage. The project proponent replied by providing the elaborated section B.6.1 & B.6.3 in revised PDD. The revised PDD was reviewed and found that the sources are now mentioned in revised PDD clearly. This was accepted and hence NIR25 was closed out.
NIR27 was raised to get the clarification on emission reduction calculations which were not mentioned in PDD clearly. The PP provided the revised PDD mentioning the emission reduction calculations clearly and in reproducible manner. This was accepted and hence NIR27 was closed out.
NIR28 was raised for the historic consumption data to be justified with documentary evidences. The PP provided the justification that the data for the historic consumption was supported with annual energy reports. The historic energy consumption data was checked during site visit and obtained the copy for the same. This was accepted and NIR28 was closed out.
The monitoring plan was not consistent in section B.7.1 of the PDD hence NIR29 was raised. The PP provided the revised PDD making the monitoring plan in section B.7.1 consistent with the methodology ACM0006 version 4. This was checked in accordance with methodology and found that revised PDD is consistent with methodology & hence NIR29 was closed out.
CAR30 was raised to get the clarifications on QA / QC to ensure high quality data. The project proponent replied by providing the clarification in section B.7.1 & Annex 4 of the revised PDD. This was cross checked and found to be in order and hence CAR30 was closed out.
Uncertainty of data was not mentioned in PDD hence NIR31 was raised. The PP provided the uncertainty for each parameter in monitoring plan of revised PDD. This was reviewed and found that the monitoring plan is revised and it is in accordance with methodology hence NIR31 was closed out.
NIR32 was raised to get the clarification on data provisions to be free from potential conflicts of interests. The PP responded by providing the details for each parameter to avoid any potential conflicts of interests in data measurements and calculations. This was accepted after reviewing the same in the revised PDD. This was accepted and hence NIR32 was closed out.
CAR35 was raised for getting the clarification on training of monitoring personnel for measurement of data. This was clarified by the PP that they have included the training procedures in the revised PDD. This was checked and found to be in order and hence CAR35 was closed out.
CAR33, CAR34 & CAR36 were raised as the PDD was not clear on monitoring plan of the parameters measured and nothing was mentioned about Authority and responsibility of project management, Registration, Monitoring, Measurement, Reporting, Training, Internal Audit, Emergency preparedness, Calibration, Maintenance, day to day record handling and corrective actions. The project proponent in his response to CAR 33, 34 & 36 made all necessary corrections required and all the necessary parameters have been included in the monitoring plan given in the rephrased PDD. This was accepted and hence CAR33, CAR34 & CAR36 were closed out.

CAR37 was raised to get the clarification on time line of the project activity. The project commercial operation started in March 2004 but there is no documentary proof provided for the delay in the project activity. The PP provided the justification that the project activity started its commercial operation in March 2004 but the host country was applied in 2003 through the consultant and the project got the HCA in 2005 but there was no methodology at that time so after the methodology got approved in 2006 the validation of project activity started in April 2006. This was checked and found that the documents provided were OK and hence CAR37 was closed out.

3.5 Project Design

The PDD of the present project activity has been prepared in accordance with the guidelines for completing CDM-PDD and followed template for CDM-PDD version 03.

CAR03 was raised to get the evidences for the start date, letter of intent, Power purchase agreement (PPA), and other government statutory clearances. The project proponent replied by providing the documentary evidences of start date, PPA, and the statutory clearances. The documents provided were reviewed and found that the proof of start date is the purchase agreement of boiler with BHEL dated 05-03-2001and the other documents were also found to be OK. Hence this was accepted and CAR03 was closed out.

CAR04 was raised to get the evidence of availability of surplus biomass for the project activity. The project proponent provided the reply that for the project activity the bagasse is generated in house and used for the project activity. This can be proved by the RT-8C form which is a document which gives the % of bagasse generated from the total amount of cane crushed. The RT– 8C form was checked and found that the form provides the detail of the bagasse generation. This was also cross checked that the project activity will only run in season and not in OFF season. This was done by interview with the people during the site visit. This was accepted and hence CAR04 was closed out.

CAR05 was raised to get the clarification on design capacity, historic production (Energy & Bagasse), and also for dismantling of previous operational plant. The PP provided the design capacity proof along with historic production data (Energy & Bagasse) from energy reports and 8C forms. The PP also provided the proof of dismantling the previously operating plant. These were verified by the validator and found that these are OK and hence CAR05 was closed out.

NIR06 was raised to get the explanation on ownership of the project activity. The project participant provided the copy of land documents to prove the ownership of the project activity. This was checked and found that these are OK. Hence this was accepted and NIR06 was closed out.

NIR07 was raised to get the clarification that the project technology will not be changed during the crediting period. The PP provided the documentary evidence which states that the project technology will not be changed during the crediting period. This was accepted and hence NIR07 was closed out.

NIR08 was raised to get the clarification on initial training for operation and maintenance of project activity. The PP provided the revised PDD which was mentioning about the operation & maintenance training to the personnel. This was checked during site visit by interviewing the plant personnel and found to be OK hence NIR08 was closed out.

NIR09 was raised to get the clarification on training & maintenance needs for the project activity which were not listed in the PDD. The PP provided the revised PDD mentioning the future training needs in section A.4.3. The revised PDD received was checked and found to be correct. Hence NIR09 was closed out.

NIR10 was raised to get the clarification on the table of emission reduction for start and end month of the year. The PP provided the revised PDD mentioning the start month and end month of the year in section A.4. This was found to be in order and hence NIR10 was closed out.

NIR11 was raised for getting the clarification on ODA for the project activity. The PP replied by providing the CA certificate which says that the project activity has not utilized the ODA funds. The letter was checked along with loan documents and this was accepted and hence NIR11 was closed out.

The methodology title was wrongly mentioned in the PDD hence CAR12 was raised. The PP mentioned the title of the methodology correctly in the revised PDD which were checked and found to be OK hence CAR12 was closed out.

3.6 Choice of the Crediting Period

The crediting period chosen by the project participant is fixed for 10 years. This is mentioned in PDD in section C.2. The project start date is 03-09-2004 when the board of directors approved the proposal of 15MW power plant.

CAR38 was raised to get the proofs of starting date of project activity which was mentioned as 05-03-2001in the PDD. The project proponent responded by telling that the purchase orders were placed on 05-03-2001 so this was taken as start date but as the board approved the project before this date hence the start date has been taken as 05-03-2001. This was mentioned in revised PDD. This was verified with the LOI. This was accepted and hence CAR38 was closed out.

3.7 Environmental Impacts

NIR39 & NIR42 was raised for getting the state pollution control board clearance for the project activity. The project proponent replied by providing the State Pollution control board certificate as documentary evidence for the same. SPCB report document and the revised PDD was checked and found to be in order and hence NIR39 & NIR42 were closed out.

No negative environmental impacts reported or seen during the site visit by the lead assessor. This was also cross checked by interviewing some local people.

3.8 Local Stakeholder Comments

NIR40 was raised to get the copies of NOC and other clearances from the stake holders. The project proponent provided the NOC from the local village panchayat which was cross checked during the site visit by interviewing the local people by the lead assessor. The PP also provided all the evidences which were desk reviewed and found to be OK. Hence NIR40 was closed out.

NIR41 was raised to get the clarification on the media used to invite comments from the local stake holders. The PP responded by providing the invitation letters written to the stake holders mentioning the time date & venue for the stake holder consultation process. The letters provided were checked and also interviewed the people to clarify this and found that the letters are correct. Hence NIR41 was closed out.

NIR43 was raised for getting the minutes of meeting of local stake holders and also mention the local stake holder consultation process transparently. The PP replied by providing the rephrased PDD mentioning the LSC process transparently and also providing the written responses from the LSC. This was accepted after reviewing the same and hence NIR43 was closed out.

NIR44 was raised to get the clarification on comments from stake holders and the effort PP has taken to address those comments. The PP replied by providing the summary of LSC in revised PDD. This was checked and found to be in order & hence NIR44 was closed out.

4. Comments by Parties, Stakeholders and NGOs

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

4.1 Description of How and When the PDD was Made Publicly Available

The PDD and the monitoring plan for this project were made available on the SGS website www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id= 280 and were open for comments from 18-05-2007 until 16-06-2007. Comments were invited through the UNFCCC CDM homepage.

4.2 Compilation of All Comments Received

No comment received

4.3 Explanation of How Comments Have Been Taken into Account

No comment received

5. Validation Opinion

SGS has performed a validation of the project: "20 MW Bagasse based Cogeneration power project at Bannari Amman Sugars Limited, Sathyamangalam, Tamil Nadu." 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 installing the project activity, PP has reduces CO2 emissions by generating electricity using Bagasse as fuel and 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 Prevailing practice barrier, Technological barriers & Other barrier analysis for the project activity; 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 a future project as mentioned in the PDD. The project will likely achieve the estimated (807930 tCO2 for 10 years) amount of emission reductions.

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

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

6. List of Persons Interviewed

Date	*Name*	*Position*	*Short description of subject discussed*
12-06-2007	Mr. R Murgesan	Vice President	*Discussion on Financials & Training requirements*
12-06-2007	Mr. M Mahesh Kumar	Consultant	*Discussion on Financials & Training requirements. PDD discussion on monitoring plan, Additionality, Baseline, Applicability etc.*
12-06-2007	Mr. S N Palanisamy	President Panchayat	*Interview on stake holder consultation process carried out by PP.*
12-06-2007	Mr. A M chinnarajan	Secretary Farmer association	*Interview on stake holder consultation process carried out by PP.*

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
/2/ Modalities of Communication
/3/ PDD version 2 dated 30-05-2007
/4/ PDD version 3 dated 13-09-2007
/5/ PDD version 4 dated 23-10-2007
/6/ PDD version 5 dated 16-01-2008
/7/ PDD version 6 dated 18-06-2008

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/ No ODA letter
/2/ Power purchase Agreement
/3/ No Technology change letter
/4/ Technological barrier Proof letter
/5/ Pollution control board consent
/6/ Agreement for Boiler & Turbine supply with BHEL as start date proof
/7/ Commissioning proof
/8/ Export meter specifications
/9/ Calibration certificates of energy meter & weigh bridge
/10/ MNES Report
/11/ Panchayat Clearance
/12/ Boiler specifications
/13/ Historic generation
/14/ Dismantling proof of earlier plant
/15/ Biomass purchase records & truck load data
/16/ Flow meter calibration
/17/ Stake holder feedback
/18/ Minutes of meeting of stake holder consultation
/19/ Appointment of CDM consultant letter
/20/ Appointment of DOE letter
/21/ CER calculation sheet
/22/ Common practice data
/23/ Pre project energy balance report

8. Annex 1: Local assessment

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

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Specifications mentioned in PDD for the CDM project activity.		PDD	Purchase orders of turbine received from the project proponent mentions the specification mentioned in the PDD.	OK	OK
Proof of calculation of Emission reduction mentioned in PDD		PDD	The excel sheet provided was checked and found that the excel sheet was not in order so modified and provided again. This was checked and found to be in order mentioning all the formulas used.	OK	OK
Fossil fuel co firing may be done or not.		PDD	The project proponent clarified that no fossil fuel will be co fired in the boiler and same was also supported by the letter from supplier. This was also verified during site visit by the local assessor.	OK	OK
Proof of 180 days crushing season		PDD	The project proponent provided the RT-8C form for the whole crushing season as proof of 180 days of operation.	OK	OK
Project boundary was not clearly described in PDD.		PDD	The project boundary is now clearly defined in revised PDD. This was also checked by local assessor during site visit.	OK	OK
Start date of crediting period was not clear.		PDD	This was rephrased in PDD by the project proponent.	OK	OK
Monitoring Plan mentioned to be checked during site visit		PDD	The project activity is running so the physical verification was done for the parameters to be monitored and found that it is in line with the methodology. The monitoring plan of PDD was discussed at site and it was concluded that the project proponent will take care in implementing the monitoring plan and also maintain the proper records of the same.	OK	OK
Proof that EIA is not required		PDD	Proof of EIA is not required	OK	OK

to be obtained during site visit.			obtained from project proponent in the form of Notification.		
NOC from Pollution control board		PDD	As the project activity is the new project activity and still in construction phase so consent to establish has been obtained by the project proponent. The consent to operate will be verified during verification stage.	OK	OK

9. Annex 2: Validation Protocol

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

REQUIREMENT	REFERENCE	Comments	CONCLUSION
1. All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	Marrakech Accords, CDM Modalities §30	India ratified the Kyoto Protocol on 26th August 2002 and is allowed to participate. (http://unfccc.int/parties_and_observers/parties/items/2109.php)	OK
2. 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.	Marrakech Accords, CDM Modalities §29 and §30	The project is unilateral. However it would assist Annex-1 Party/ies through the sale of CERs.	OK
3. 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	Marrakech Accords, CDM Modalities §29 and §30 Kyoto Protocol Art. 12.2, Marrakech Accords, CDM Modalities §40a	Copy of letter of approval issued from Indian Designated National Authority (DNA) need to be provided.	CAR 1
4. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available	Marrakech Accords, CDM Modalities, §40	The project invited International stakeholder consultation (ISHC) through SGS web site: http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=280 and open for comments from 18th May 2007 to 16th June 2007. No comment was received	OK
5. The project design document shall be in conformance with the UNFCCC CDM-PDD format	Marrakech Accords, CDM Modalities,	The PP correctly used the PDD version with out modifying / adding the headings, nor	OK

REQUIREMENT	REFERENCE	Comments	CONCLUSION
	Appendix B, EB Decisions	introduced logos or changed fonts.	
6. The project participants shall submit a letter on the modalities of communication (MoC) before submitting a request for registration	EB-09 F_CDM_REG form	The modalities of communication need to be submitted to the validator	CAR 2
7. 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?		Not applicable (N/A)	OK

Table 2 PDD

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of Project Activity					
A.1. Project Title					
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	A.1	PDD	The project uses unique project title as “20 MW Bagasse based co-generation power project at Bannari Amman sugars Limited, Satyamanglam, Tamilnadu”.	OK	OK
A.1.2. Are there an indication of a revision number and the date of the revision?	A.1	PDD	PDD received from Project Proponent displays clearly version and date; Version 02 dated 16/05/2007	OK	OK
A.1.3. Is this in consistency with the time line of the project’s history?	B.5	PDD	Yes, this is consistent with the time line of the project history, board meeting, Power Purchase Agreement and purchase agreements were seen during site visit.		OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
			Please provide copies of evidences for the start date, Letter of Intent (LoI) with equipment supplier, Power Purchase agreement and commissioning of electricity supply meters to the grid, Consents to establish from statuary body (ies), Invoices paid by the electricity board (CESCOM) and Project completion date.	CAR 3	
A.2. Description of the project activity					
A.2.1. Is the description delivering a transparent overview of the project activities?	A.2	PDD	The project activity correctly uses ACM0006 version 04. The CDM project activity has been implemented at BASL sugar factory, Satyamanglam, Tamilnadu Proof of evidence of available for surplus bagasse need to be provided to the DoE. The cogeneration plant is exporting surplus power to the TNEB grid, after meeting the sugar plant requirement of steam and power. The project will use the available Bagasse for generation of electricity. The electricity generated is supplied to southern grid and thus reduces GHG emissions and favorable to sustainable development as Bagasse left uncontrolled for decay would have generated methane.	CAR 4	OK
A.2.2. Is all information provided in compliance with actual situation or planning?	A.2, A.4.3 , B.4,	PDD	The assumptions and figures with relevance on baseline. Proof of design capacity and historic production need to be furnished to the DoE by the project proponent (PP).	CAR 5	OK
A.2.3. Is all information provided consistent with details			Pending CARs / NIRs	Pending	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
provided in further chapters of the PDD?					
A.3. Project Participants					
A.3.1. Is the table required for the indication of project participants correctly applied?	A.3	PDD	The party involved in the project activity is the PP "Bannari Amman Sugars Limited", and the Party to the project is India. The table is correctly applied.	OK	OK
A.3.2. Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	Annex 1	PDD	Contact information on participants in the project activity has been provided in the PDD under Annex 1; the same has been verified during the site visit.	OK	OK
A.4. Technical description of the project activity					
A.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	A.4	PDD	The project is located in Satyamanglam Taluk, Erode District and as per the contact details mentioned in Annex1. The location of mill of Bannari Amman Sugars Limited is verified physically during the site visit.	OK	OK
A.4.2. Do the project participants possess ownership or licenses which will allow the implementation of the project at that site / those sites?	A.3 & A.2	PDD	The PP is one among the listed companies in share market. Provide company's ownership proof	NIR 6	OK
A.4.3. Is the category(ies) of the project activity correctly identified?	A.4.2 & B.1	PDD	The project falls under sectoral scope 1 and uses ACM0006 Version 04 "Consolidated baseline methodology for grid connected electricity generation from biomass residues	OK	OK
A.4.4. Does the project design engineering reflect current good practices?	A.2	PDD	The Project activity uses environmentally safe and sound technologies as the waste left unused can generate methane in the absence of the project activity and there will be no export of power to the grid.	OK	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
A.4.5. Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance and is the explanation how the project will reduce greenhouse gas emission transparent and suitable?	A.2, A.4.3 .	PDD	The project activity uses ACM0006 version 04. The BASL commissioned 20 MW capacity cogeneration power project (the “project activity”) at Satyamanglam to utilize the surplus bagasse and to generate additional power and supply of grid by putting up cogeneration system. This will result in GHG reduction.	OK	OK
A.4.6. Is all information provided in compliance with actual situation or planning as available by the project participants?	A.4.3 , B.3	PDD	The information provided in the PDD needs supporting evidences The project boundary needs to be checked and verified.	Pending NIRs / CARs , I & SV	OK
A.4.7. 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?	B.5.4	PDD	The project uses high pressure boiler Turbo generator set of 67ata to cogeneration system to generate electricity.	OK	OK
A.4.8. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	A.4.3 , C.1.2	PDD	The project proponent needs to provide the documentary proof that there will no change in the project Technology.	CAR 7	OK
A.4.9. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?		PDD	The PDD does not contain information on training and maintenance.	NIR 8	OK
A.4.10. Does the project make provisions for meeting training and maintenance needs?		PDD	No such provisions are mentioned in the PDD	NIR 9	OK
A.4.11. Is a schedule available on the implementation of the project and are there any risks for delays?	A.2, A.4.1 .4,	PDD	The project has already implemented and started operations from 2004.	Ok	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
	B.5				
A.4.12. Is the table required for the indication of projected emission reductions correctly applied?	A.4.4	PDD	The table reflects that the PP has used Indian financial year (April to March) and therefore the year is encompassing two years (2007 – 2008, 2008 – 2009 and like wise). Please clarify start and end month of the year.	NIR 10	OK
A.5. Public Funding					
A.5.1. Does the information on public funding provided conform with the actual situation or planning as presented by the project participants?	A.4.5 & Annex 2	PDD	Section A.5 and Annex 2 of PDD states that no Official Development Assistance (ODA) was used for this project activity. Please provide evidence that no ODA was utilized for the project activity.	NIR 11	OK
A.5.2. Is all information provided consist with details provided by further chapters of the PDD (in particular annex 2)?		PDD	The information provided in the PDD are consistent and confirms to Annex 2	OK	OK
A.5.3. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance		PDD	There is no funding sought from any Annex I Parties.	Ok	OK
B. Baseline and Monitoring Methodology					
B.1. Choice and Applicability					
B.1.1. Is the baseline methodology previously approved by the CDM Methodology Panel?	B.1	PDD	The project uses “Consolidated methodology for grid-connected electricity generation from biomass residues” ACM0006 Version 4. On This methodology version 4 request for registration can be sent till January 2008. The methodology title mentioned wrongly in the PDD	CAR 12	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
B.1.2. Is the baseline methodology the one deemed most applicable for this project?	B.2 & B.4	PDD and ACM 0006 version 4	The Project correctly uses consolidated methodology ACM0006 version 04. The PP utilizes the surplus bagasse available for generation of power and supply to the grid.	OK	OK
B.1.3. Is the choice of the methodology correctly justified by the PDD and is the project in conformance with all applicability criteria of the applied methodology?	B.2	PDD and ACM 0006 version 4	The justification of choice of methodology is clearly defined in the PDD and in conformance with the applicability criteria of the methodology ACM0006 version 4.	OK	OK
B.2. Project boundary					
B.2.1. Are all emission sources and gasses related to the baseline scenario, project scenario and leakage clearly identified and described in a complete manner?	B.3	PDD and ACM 0006 version 4	The project considered emissions from fossil fuel fired in the power plants connected to the electricity system and emissions from fossil fuel based on heat generation that is displaced through the project activity. In addition to that the spatial extent of the project activity includes, Fuel storage and processing area, boiler, Turbo Generator set and all other power generating equipments, Captive consumption units, steam consuming equipments and auxiliary equipments, The means for transportation of biomass residues to the project site, all grid connected power plants of the southern regional grid. The PP considered clearly the sources of GHG emissions under baseline as per the guidelines for completing the PDD.	OK	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
			The project boundary needs to be checked during site visit.	TBC	OK
B.2.2. In case of grid connected electricity projects: Is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	A.2	PDD	The project falls under southern regional grid and the cogeneration plant is exporting surplus power (after meeting the captive requirement of steam and power) to TNEB, and the project correctly identified the grid in accordance to EB guidance.	OK	OK
B.2.3. Are the project's spatial boundaries (geographical) and the project's system boundaries (components and facilities used to mitigate GHGs) clearly defined?	A.2, B.3	PDD	The project falls under southern regional grid and the cogeneration plant is exporting surplus power (after meeting the captive requirement of steam and power) to TNEB.	OK	OK
B.3. Identification of the Baseline Scenario					
B.3.1. Does the PDD discuss the identification of the most likely baseline scenario? Does the PDD follow the steps to determine the baseline scenario required by the methodology and is the application of the methodology and the discussion and determination of the chosen baseline transparent?	B.4	PDD	The PDD defines clearly, step by step the identification process for selection of the baseline scenario. The PP considered option 1 & 2.	OK	OK
B.3.2. Does the application consider all potential realistic and credible baseline scenarios in the discussion taking into account relevant national and/or sectoral policies, macro-economic trends and political aspirations??			The project activity has considered all the realistic and credible baseline scenarios in the discussion in the PDD but the discussion is not clear and it shows that because of increase in capacity of sugar plant has resulted in installation of project activity which is not allowed and it contradicts their own statement in the PDD that the project activity	CAR13	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
			is running since 2004.		
B.3.3. Is the choice of the baseline compatible with the available data?			The baseline scenario selected from the possible scenarios is consistent with the available data. Pending CAR13 The Choice of the baseline emission factor is compatible with available data issued by Central Electricity Authority (CEA) and Ministry of Power, Government of India.	Pending	OK
B.3.4. Is conservativeness addressed in the way of identifying the baseline?			The baseline selected provides the conservativeness in determining the emission reductions.	Ok	OK
B.3.5. Does the selected baseline represent the most likely scenario among other possible and/or discussed scenarios?			The Project uses baseline scenario 14 for the project activity. This includes the combination of P4 and P5, H5, and B4 according to PDD which matches with the methodology. But it is not clear how this scenario fits in the project activity. Please clarify.	CAR 14	OK
B.4. Additionality					
B.4.1. Does the PDD clearly demonstrate the additionality using the approach as given by the methodology and by following all the required steps?			The PDD demonstrates the additionality using the tool of demonstration of additionality version 3. The steps needs to be followed are followed in the PDD.	OK	OK
B.4.2. In case of using the additionality tool: Are all steps followed in a transparent manner?			The PP uses tool for demonstration of additionality version 3. The steps have been followed.	OK	OK
B.4.3. Is the discussion on additionality and the evidence provided consistent with the starting date of the project			Proof of starting date of project activity needs to be provided by the project proponent. The discussion on additionality is not clear and the PP needs to provide the evidence of decision making process for the project activity.	CAR15	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
B.4.4. Is the discussion on additionality consistent with the identification all potential realistic and credible baseline scenarios			The discussion on additionality is not consistent with the potential realistic and credible baseline scenarios mentioned in the PDD. The step 1 is not clear and the PDD does not discusses the additionality in comparison with project scenario.	CAR16	OK
B.4.5. If an investment analysis has been used, has it been shown that the proposed project activity is economically or financially less attractive than at least one other alternative without the revenue from the sale of CERs?			Step2 Investment analysis has not been used in the PDD.	OK	OK
B.4.6. If a barrier analysis has been used, has it been shown that the proposed project activity faces barriers that prevent the implementation of this type of proposed project activity but would not have prevented the implementation of at least one of the alternatives?			Step3 is not clearly described in the PDD. The evidences need to be provided to prove the Investment barrier, technological barrier, and Other barriers. It is not clear in the PDD that the project activity would not have been established if the project is not a CDM project and the barriers mentioned would have prevented the installation of project activity.	CAR17	OK
B.4.7. Has it been shown that the project is not common practice?			Step 4 - The project activity is not a common practice as described in PDD. The documentary evidences needs to be provided by the project proponent for the same. The link mentioned in table B1 of PDD is not opening. Please clarify and provide the hard copy of the document.	CAR18	OK
B.4.8. Is it demonstrated/justified that the project activity itself is not a likely baseline scenario			Pending CARs	Pending	OK
B.5. Application of the baseline methodology					
B.5.1. Has the approved methodology been applied correctly			The approved Consolidated methodology	CAR19	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
for determining **baseline emissions**?			ACM0006 version 4 is applied correctly. The PDD uses the formulas as per the methodology. The methodology requires to calculate efficiency before and after the implementation of project activity. The baseline emission calculation is not mentioned in PDD.		
B.5.2. Has the approved methodology been applied correctly for determining **project emissions**?			The approved Consolidated methodology ACM0006 version 4 is applied correctly. The PDD mentions the formulas as per the methodology. The calculations are not shown in the PDD.	CAR20	OK
B.5.3. Has the approved methodology been applied correctly for determining **leakage**?			The approved Consolidated methodology ACM0006 version 4 is applied correctly. The PDD mentions the formulas as per the methodology. The calculations are not shown in the PDD.	CAR21	OK
B.5.4. Where applicable, has the approved methodology been applied correctly for the **direct calculation of emission reductions**			There is no direct calculation of emission reduction.	OK	OK
B.5.5. Have all the methodological choices been explained, have they been properly justified and are they correct			The scenario used for the baseline is not mentioned in section B.6.1 of PDD. The PDD mentions that it is using ACM002 for calculation of baseline emission factor calculation but the calculation or the emission factor is not mentioned in section B.6.1 of PDD. The documentary proof for the same needs to be provided by the project proponent.	CAR22	OK
B.5.6. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?			The uncertainty in the GHG emission estimation is not mentioned in section 6.1 of PDD.	CAR23	OK
B.6. Ex-ante data and parameters used					
B.6.1. Are the data provided in compliance with the methodology?			The project uses ex-ante for calculation of emission factor. The emission factor for the grid is	NIR24	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
			considered as 0.86 tCO2 / MWh. Proof for the same needs to be provided. The parameters mentioned for Project emissions and Leakage are also mentioned in the PDD but the proof is not provided for the same.		
B.6.2. Is all the data derived from official data sources or replicable records and have these been correctly quoted?			There is no mention of source of data from where the baseline emission factor and parameters for Project emissions and leakage is taken.	NIR25	OK
B.6.3. Is the vintage of the baseline data correct?			Pending NIR24 & NIR25	pending	OK
B.7. Calculation of Emissions Reductions					
B.7.1. Has the approved methodology been applied correctly for determining **emission reductions**?			The approved Consolidated methodology ACM0006 version 4 is applied correctly. The PDD mentions the formulas as per the methodology. The spread sheet for the calculations need to be provided by the PP.	NIR26	OK
B.7.2. Are the emission reduction calculations documented in a complete and transparent manner?			The PDD mentions the formulas used as per methodology but does not show the ER calculations in transparent manner in the PDD as this cannot be reproduced by the reader.	NIR27	OK
B.7.3. Have conservative assumptions been used to calculate emission reductions?			Yes conservative assumptions have been used to calculate emission reductions. This is based on baseline emission factor. Calculations still needs to be checked. Pending NIR26.	Pending	OK
B.7.4. Is the projection based on provable input parameter?			The historic efficiency data mentioned in PDD section 6.2 needs to proved by providing documentary proof.	NIR28	OK
B.7.5. Is the projection based on same procedures as used for later monitoring or acceptable alternative models?			The projections are based on same procedures	OK	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
			used for later monitoring.		
B.7.6. Is the calculation of the emission reduction correct?			Pending NIR26	pending	OK
B.8. Emission Reductions					
B.8.1. Will the project result in fewer GHG emissions than the baseline scenario?			The project will result in GHG emission reductions . Pending NIR26	pending	OK
B.8.2. Is the form/table required for the indication of projected emission reductions correctly applied?			The table required for indication of emission reductions is correctly applied.	OK	OK
B.8.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?			The projections are in line with the indicated crediting period.	OK	OK
B.9. Monitoring Methodology					
B.9.1. Does the monitoring methodology provide a consistent approach in the context of all parameter to be monitored and further information provided by the PDD?			The monitoring methodology used is ACM0006 version 4. The PDD uses the consistent approach for the monitoring of all the parameters.	OK	OK
B.9.2. Does the monitoring methodology apply consistently the choice of the option selected for monitoring both of project and baseline emissions?			The monitoring of baseline emission parameters along with project emission and leakage parameters is mentioned in the PDD.	OK	OK
B.10. Data and parameters monitored					
B.10.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?			The monitoring plan provides the parameters needs to be monitored for the collection and archiving of data necessary for estimation of emission reductions with in the project boundary during the crediting period.	OK	OK
B.10.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the approved methodology applied?			The project GHG indicators are reasonable and according to the methodology applied i.e. ACM0006 version 4.	OK	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
B.10.3. Will it be possible to determine the specified project GHG indicators?			The monitoring plan mentioned in PDD section B7.1 according to the methodology ACM0006 version 4 it is possible to determine the project GHG indicators.	OK	OK
B.10.4. Will the indicators enable comparison of project data and performance over time?			The indicated parameters in section B.7.1 will enable us to compare the data over a period of time during the crediting period.	OK	OK
B.10.5. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?			The information provided for each monitoring parameter in section B.7.1 of PDD is not detailed enough to establish that the verification will be easy for this monitoring plan	NIR29	OK
B.10.6. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records?			The QA/QC procedures for each parameter are missing in section B.7.1, B.7.2, and Annex 4 of PDD.	CAR30	OK
B.10.7. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?			Pending CAR30	Pending	OK
B.10.8. Are all formulae used to determine project emission clearly indicated and in compliance with the monitoring methodology.			The formulae for determining project emissions are mentioned in section B.6.1 of PDD.	OK	OK
B.11. Quality Control (QC) and Quality Assurance (QA) Procedures					
B.11.1. Is the selection of data undergoing quality control and quality assurance procedures complete?			Pending CAR30	pending	OK
B.11.2. Is the belonging determination of uncertainty levels done correctly for each ID in a correct and reliable manner?			Uncertainty of data is not mentioned in PDD.	NIR31	OK
B.11.3. Are quality control procedures and quality assurance procedures sufficiently described to ensure the delivery of high quality data?			Pending CAR30	Pending	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
B.11.4. Is it ensured that data will be bound to national or internal reference standards?			The assurance that the monitoring data will be reproducible and comparable to national reference standards depends on the applicability of QA/QC procedures. Pending CAR30 .	Pending	OK
B.11.5. Is it ensured that data provisions will be free of potential conflicts of interests resulting in a tendency of overestimating emission reductions?			Data manipulations at site which will provide conflict of interest and may give rise to intended or unintended emissions which may results in overestimating emission reductions is not mentioned in PDD and it will also depends on the uncertainty of each parameter.	NIR32	OK
B.12. Operational and management structure					
B.12.1. Is the authority and responsibility of project management clearly described?			The authority and responsibility of project management is not defined in the PDD.	CAR33	OK
B.12.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?			The authority and responsibility for registration and measurement is not defined in the PDD.	CAR34	OK
B.12.3. Are procedures identified for training of monitoring personnel?			There is no mention of training of monitoring personnel in PDD. Proof for training needs to be provided by PP.	CAR35	OK
B.13. Monitoring Plan (Annex 4)					
B.13.1. Is the monitoring plan developed in a project specific manner clearly addressing the unique features of the CDM activity?			Missing in Annex 4 of PDD.	CAR36	OK
B.13.2. Does the monitoring plan completely describes all measures to be implemented for monitoring all parameter required, including measures to be implemented for ensuring data quality?			Missing in Annex 4 of PDD.	CAR36	OK
B.13.3. Does the monitoring plan provide information on monitoring equipment and respective positioning in			Missing in Annex 4 of PDD.	CAR36	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
order to safeguard a proper installation?					
B.13.4. Are procedures identified for calibration of monitoring equipment?			Missing in Annex 4 of PDD.	CAR36	OK
B.13.5. Are procedures identified for maintenance of monitoring equipment and installations?			Missing in Annex 4 of PDD.	CAR36	OK
B.13.6. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)			Missing in Annex 4 of PDD.	CAR36	OK
B.13.7. Are procedures identified for dealing with possible monitoring data adjustments and missing data allowing redundant reconstruction of data in case of monitoring problems??			Missing in Annex 4 of PDD.	CAR36	OK
B.13.8. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?			Missing in Annex 4 of PDD.	CAR36	OK
B.13.9. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?			Missing in Annex 4 of PDD.	CAR36	OK
B.14. Baseline details					
B.14.1. Is there any indication of a date when determine the baseline?			Baseline determination date is 16-05-2007	OK	OK
B.14.2. Is this in consistency with the time line of the PDD history?			It is not consistent with time line of the PDD history. It is not evident why this project is coming up so late though it started its operation in 2004. There is no justification of this delay mentioned in PDD and there was no documentary proof or reason for delay provided to the validator during the site visit. Please justify with documentary evidences.	CAR37	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
B.14.3. Is all data required provided in a complete manner by annex 3 of the PDD?			The baseline emission factor data is provided in Annex 3 of PDD.	OK	OK
***C.* Duration of the Project / Crediting Period**					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?			The start date of project activity mentioned is 27-03-2001 but the proof for this needs to be provided. The operational life time is defined as 20 years which is reasonable.	CAR38	OK
C.1.2. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?			The PP has chosen fixed crediting period of 10 years starting from 01-09-2007 or date of registration which ever is later.	OK	OK
C.1.3. Does the project's operational lifetime exceed the crediting period			The project life time is 20 years and it exceeds the crediting period of 10 years.	OK	OK
D. Environmental Impacts					
D.1.1. Does the project comply with environmental legislation in the host country?	D.2	PDD	The project meets with National and State statuary requirements and obtained clearances such as environmental consents and Host country approval.	OK	OK
D.1.2. Has an analysis of the environmental impacts of the project activity been sufficiently described?	D.1	PDD	Yes, the EIA study was conducted for the project and the important parameters are summarized in the PDD, Enclosure I.	OK	OK
D.1.3. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	D.1, D.2	PDD	EIA study is mandatory for this project as per the Ministry Of Environment and Forest Notification on Environmental Impact Assessment; Notification S.O.60 (E), dated 27/01/1994 (incorporating amendments vide S.O. 356(E) dated 4/5/1994, S.O. 318(E) dated 10/4/1997, S.O. 319 dated 10/4/1997, S.O. 73(E) dated 27/1/2000, S.O.	NIR39	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
			1119(E) Dated 13/12/2000, S.O. 737(E) dated 1/8/2001, S.O. 1148(E) dated 21/11/2001, S.O. 632(E) dated 13/06/2002). The PP carried out an EIA which was cleared by State Pollution Control Board. Clearance copy need to be provided		
D.1.4. Will the project create any adverse environmental effects?	D.2	PDD	No adverse environmental impact is envisaged from the project as the PP has obtained consents from Karnataka Pollution Control Board, the consent under section 21 of the Air Prevention and Control of Pollution, Act 1981 (Central Act 14 of 1981) as amended Consent under Section 25/26 of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974) as amended and EIA clearance from the regulatory bodies. The Enclose I of the PDD also highlighted the environmental parameters which further required to be taken care as per the environmental management plan.	OK	OK
D.1.5. Are trans-boundary environmental impacts considered in the analysis?	A.4.1.4, A.4.1. 3	PDD	The project is located at satyamanglam, District Erode, Tamilnadu state. The location in landlocked.	OK	OK
D.1.6. Have identified environmental impacts been addressed in the project design?	D.1, Enclosure I	PDD	The environmental parameters such as Air, Noise, Land and soil, transportation of vehicles carrying the biomass, water environment, ecology impacts are identified as per the EIA report and have been addressed under enclosure I.	Ok	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
E. Stakeholder Comments					
E.1.1. Have relevant stakeholders been consulted?	E.1	PDD	Yes, the PP has gone through stake holder (SH) consultation process. The identified stake holders were Local cane growers association, elected body of representatives (Local panchayat), Tamilnadu Pollution control board, TNEB. The SH expressed their support for the project activity through written communication. Copy of the same need to be provided to the validator	NIR40	OK
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	E.1	PDD	No clear information provided in the PDD about the media used for inviting comments. Please provide information on Media used for invitation of SH and Copies of comments received	NIR41	OK
E.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	D.1,	PDD	SH consultation is required as per EIA requirement. As per the requirement, the EIA clearance is given only after the successful completion of public hearing as per MoEF notification on public hearing dated April 10th 1994. The PP has gone under the process of public hearing and has obtained No objection certificate (NOC) from Tamilnadu pollution control board (TPCB). Copies of NOC issued by TPCB Environmental consent for Water and Air	OK NIR42	OK

CHECKLIST QUESTION	Ref. ID	MoV*	COMMENTS	Draft Concl	Final Concl
E.1.4. Is the undertaken stakeholder process described in a complete and transparent manner?	E	PDD	The procedures are clearly explained in the PDD.	OK	OK
E.1.5. Is a summary of the stakeholder comments received provided?			Copies of the communication received from the SH need to be provided to the validator	NIR43	OK
E.1.6. Has due account been taken of any stakeholder comments received?	E.2	PDD	No reference of comments from the SH is mentioned in the PDD and the efforts PP is taking to address those comments.	NIR44	OK

10. Annex 3: Overview of Findings

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
1	CAR	Copy of letter of approval issued from Indian Designated National Authority (DNA) need to be provided.	1.3
Date: 13/09/2007 [Comment Client] Color scanned copy of the Host Country Approval obtained from Ministry of Environment and Forests is being submitted to the DOE.			
Date: 19-10-2007 [Pankaj Mohan] The LoA dated 28th February 2005 having F.No. 4/10/2003-CCC was seen during the site visit and same has been scanned and attached with the Pack. Hence CAR01 could be closed. [Acceptance and close out] OK CAR01 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
2	CAR	The modalities of communication need to be submitted to the validator	1.6
Date: 13/09/2007 [Comment Client] The modalities of communication is being submitted to the DOE.			
Date: 19-10-2007 [Pankaj Mohan] Modalities of communication dated 25-09-2007 is received and accepted.. [Acceptance and close out] OK CAR02 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
3	CAR	Please provide copies of evidences for the start date, Letter of Intent (LoI) with equipment supplier, Power Purchase agreement and commissioning of electricity supply meters to the grid, Consents to establish from statuary body (ies), and Project completion date.	A.1.3
Date: 13/09/2007 [Comment Client] The following document are being submitted to the DOE: ▪ Evidence for start date: Purchase contract and purchase order for major equipments (TG and boiler) placed on BHEL. ▪ Power purchase agreement signed with the Tamil Nadu Electricity Board (TNEB) ▪ Proof for commissioning of the project activity ▪ Consent to establish obtained from TNPCB, TEDA and the local panchayat			
Date: 19-10-2007 [Pankaj Mohan] The evidences provided were reviewed and found to be in order and hence CAR03 could be closed out. [Acceptance and close out] OK CAR03 closed.			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
4	CAR	Proof of evidence of available of Bagasse need to be provided to the DoE	A.2.1
Date: 13/09/2007 [Comment Client] Bagasse availability – Form 8c "Annual manufacturing reports" of the sugar plant would be provided to the DOE. The report shows the cane crushed and %bagasse for the year from which annual bagasse availability for the year can be arrived at.			
Date: 19-10-2007 [Pankaj Mohan] RT 8C form mentioned in the reply is the document which is the government document and provides the detail of Bagasse generation from the plant. This was accepted and hence CAR04 could be closed. [Acceptance and close out] OK CAR04 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
5	CAR	Proof of design capacity and historic production need to be furnished to the DoE. The project proponent (PP) also required furnishing the proof of dismantling of previously operational plant.	A.2.2

Date: 13/09/2007
[Comment Client] Proof of design capacity of sugar plant – Copy of the sugar plant licensed capacity would be provided.
Proof of design capacity of project plant – Copies of name plate and/or technical specifications are being provided.
Historic Bagasse production – Form 8c "Annual manufacturing reports" of the sugar plant would be provided.
Historic energy production - The historic energy generation data mentioned in section B.6.2 of the PDD would be supported with consolidated annual energy reports. These annual reports have been prepared based on monthly energy reports. The monthly reports have been prepared based on metered energy data from the log books. The DOE has verified sample log book figures with the monthly and annual reports during the Validation site visit. Copies of annual and monthly energy reports are being submitted to the DOE.
Proof of dismantling of earlier plant – Copies of relevant supporting document is being provided

Date:19-10-2007 [Pankaj Mohan]
The documentary proofs for design capacity of sugar plant, design capacity of project plant, Historic Bagasse & Energy generations along with the dismantling proof provided were reviewed and found that these are in order and can be accepted. Hence CAR05 could be closed.
[Acceptance and close out] OK CAR05 closed

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
6	NIR	Provide company's ownership proof	A.4.2

Date: 13/09/2007
[Comment Client] Copy of land documents are being submitted as proof that the project site is owned by the project promoters

Date: 19-10-2007 [Pankaj Mohan]
The ownership proofs were provided are the copies of land documents. These were reviewed and found to be in order. Hence NIR06 could be closed.
[Acceptance and close out] OK NIR06 closed.

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
7	NIR	The project proponent needs to provide the documentary proof that there will be no change in the project boundary.	A.4.8

Date: 13/09/2007
[Comment Client] BASL would submit a declaration that the technology used and the project boundary would not be changed during the CDM crediting period of the project activity.

Date: 19-10-2007 [Pankaj Mohan]
The PP has provided the proof for the same which was reviewed and found to be OK hence NIR07 could be closed out. .
[Acceptance and close out] OK NIR07 closed

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
8	NIR	The PDD does not contain information on training and maintenance.	A. 4.9

Date: 13/09/2007
[Comment Client] The information on training and maintenance for the project activity are now included in section A.4.3 of the PDD.

Date: 19-10-2007 [Pankaj Mohan]
The revised PDD is mentioning the information on training and maintenance of the project. The proof for the training was also provided which was reviewed and found to be OK. This was accepted and hence NIR08

could be closed. [Acceptance and close out] OK NIR08 closed

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
9	NIR	The project does not make provisions for meeting training and maintenance needs no such provisions for training and are mentioned in the PDD	A.4.10
Date: 13/09/2007 [Comment Client] BASL has arranged for periodic training of their power plant staff in the operation and maintenance of the project activity and related fields. On a need basis, the staff would be sent for external training or internally trained by the senior members. Copies of certificates of training are being submitted to the DOE.			
Date: 19-10-2007 [Pankaj Mohan] The training proofs provided by the PP were reviewed and found to be in order. This was also checked during site visit by interviewing some of the persons attended the training programmes. This was accepted and hence NIR09 could be closed. [Acceptance and close out] OK NIR09 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
10	NIR	The table reflects that the PP has used Indian financial year (April to March) and therefore the year is encompassing two years (2007 – 2008, 2008 – 2009 and like wise). Please clarify start and end month of the year.	A.4.12
Date: 13/09/2007 [Comment Client] The start and end months of the years are now clarified in section A.4 of the PDD. The start month would be January 2008 (expected month of registration) and end month would be December.			
Date: 19-10-2007 [Pankaj Mohan] The PP provided the revised PDD mentioning the Start & end month of the year. This is accepted and hence NIR10 could be closed out. [Acceptance and close out] OK NIR10 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
11	NIR	Please provide evidence that no ODA was utilized for the project activity.	A.5.1
Date: 13/09/2007 [Comment Client] A Chartered Accountant has verified the capital investment and sources of finance for the project activity and has confirmed that no ODA has been utilized. Copy of the certificate would be submitted.			
Date: 19-10-2007 [Pankaj Mohan] The CA letter was received and checked with the PO and loan documents. This was accepted and hence NIR11 could be closed. [Acceptance and close out] OK NIR11 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
12	CAR	The methodology title mentioned wrongly in the PDD	B.1.1
Date: 13/09/2007 [Comment Client] The methodology title is now rightly mentioned in section B.1 as per ACM0006 version 4 as “Consolidated methodology for grid connected electricity generation from biomass residues”			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD mentions the title of methodology correctly in section B.1. This was accepted and hence CAR12 could be closed. [Acceptance and close out] OK CAR12 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
13	CAR	The project activity has considered all the realistic and credible baseline scenarios in the discussion in the PDD but the discussion is not clear and it shows that because of increase in capacity of sugar plant has resulted in installation of project activity which is not allowed and it contradicts their own statement in the PDD that the project activity is running.	B.3.2
Date: 13/09/2007 [Comment Client] Transparent discussion of the baseline alternatives are now provided in section B.4 of the PDD. As per ACM0006 “the implementation of the project activity shall not result in a increase of the processing capacity of raw input”. Here the implementation of the cogeneration project activity did not result in any capacity increase of the sugar plant. The capacity increase of the sugar plant could have happened even with the pre-project cogeneration configuration since it had sufficient capacity to meet the energy requirements.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD section B.4 is mentioning the baseline discussion transparently and as per methodology ACM0006 version 4. This was accepted and hence CAR13 could be closed. [Acceptance and close out] OK CAR13 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
14	CAR	The Project uses baseline scenario 16 for the project activity. This includes the combination of P4 and P5, H4, and B4 & B1 according to PDD which does not matches with the methodology. Please explain & provide justification how this fits into. Otherwise use correct scenario.	B.3.5
Date: 13/09/2007 [Comment Client] The project activity uses baseline scenario 14 of ACM0006 version 04 for the project activity. This includes the combination of P4, P5, H5 and B4 as per ACM0006 version 04. The justification of how the baseline scenario fits into scenario 14 is now provided in section B.4 of the revised PDD.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD is received and the same was checked and found that now it is correctly mentioned and hence this can be accepted and CAR14 could be closed. [Acceptance and close out] OK CAR14 closed.			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
15	CAR	Proof of starting date of project activity needs to be provided by the project proponent. The discussion on additionality is not clear and the PP needs to provide the evidence of decision making process for the project activity.	B.4.3
Date: 13/09/2007 [Comment Client] The copy of the Purchase contract for the TG and boiler would be provided as proof for the starting date of the project activity. The discussion on additionality is now revised based on the latest “Tool for the demonstration and assessment of additionality” version 03. The evidence of decision making process for the project activity (the Board approval for the project) would be provided to the DOE.			
Date: 19-10-2007 [Pankaj Mohan] PO copies for turbine and boiler received and found to be correct and accepted. The decision making process (Board Approval) was also received and checked. Hence CAR15 could be closed out. [Acceptance and close out] OK CAR15 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
16	CAR	The discussion on additionality is not consistent with the potential realistic and credible baseline scenarios mentioned in the PDD. The step 1 is not clear and	B.4.4

		the PDD does not discusses the additionality in comparison with project scenario.	
Date: 13/09/2007 [Comment Client] The discussion on additionality is now revised based on the latest "Tool for the demonstration and assessment of additionality" version 03. The section B.4 and B.5 are now consistent with the potential realistic and credible baseline scenarios. The step 1 of the additionality has been now elaborated clearly in the revised PDD. The section includes the "implementation of the project activity not undertaken as a CDM project activity" as one of the baseline alternative and the additionality discussion includes this alternative.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD section B.4 & B.5 are now mentioning the discussion on additionality and baseline clearly and in accordance with the methodology and version 3 of tool of additionality. This was accepted and hence CAR16 could be closed. [Acceptance and close out] OK CAR16 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
17	CAR	Step3 is not clearly described in the PDD. The evidences need to be provided to prove the technological barrier, Other barriers. It is not clear in the PDD that the project activity would not have been established if the project is not a CDM project and the barriers mentioned would have prevented the installation of project activity.	B.4.6
Date: 13/09/2007 [Comment Client] The step 3 (Barrier analysis) section has been now elaborated to clearly describe the barriers faced by the project activity. Following evidences are provided as supporting to the barriers: ▪ Proof that BASL's project activity is one of the first in the region and therefore the performance and success of the technology was not well established. Also, there was no sufficient availability of trained and experienced manpower to operate the project activity. ▪ Proof that the technological barriers had materialised for the project activity – Copies of communication regarding technical problems encountered in the project ▪ Proof that BASL faced drought conditions and as a result shortage of biomass residues. For this, copy of documents showing that BASL had imported sugar for processing during these drought years is being submitted			
Date: 19-10-2007 [Pankaj Mohan] Proof of barriers faced were reviewed and found that the technological barriers can be accepted but the natural calamity like drought cannot be accepted as barrier. First of its kind in the region proof is not provided by the PP so CAR17 could not be closed. [Acceptance and close out] Open			
Date: 23-10-2007 It may be noted that though natural calamities like drought conditions would not have a long term impact on the project activity, these conditions significantly reduce the number of operating hours of the project activity and therefore affects the cash flows for the respective years of drought. Following document are provided as proof that the project activity was "First of its kind": ▪ Extracts from Ministry of Non-Conventional Sources annual report of year 2002-03			
Date: 25-10-2007 [Pankaj Mohan] The proof for first of its kind in the region is accepted and hence CAR17 could be closed. [Acceptance and close out] OK CAR17 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
18	CAR	Step 4 - The project activity is not a common practice as described in PDD. The documentary evidences needs to be provided by the project proponent for the same. The link mentioned in table B1 of PDD is not opening. Please clarify and provide the hard copy of the document.	B.4.7
Date: 13/09/2007			

[Comment Client] Following documentary evidences are being submitted for the common practice analysis: ▪ Annual report of MNES showing that the high pressure technology was not prevailing at the time of implementation of the project activity ▪ Copy of documents showing the number of sugar mills in Tamil Nadu and the mills with power export.
Date: 19-10-2007 [Pankaj Mohan] The proof received were reviewed and found to be in order hence CAR18 could be closed.. [Acceptance and close out] OK CAR18 closed

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
19	CAR	The approved Consolidated methodology ACM0006 version 4 is applied correctly. The PDD uses the formulas as per the methodology. The methodology requires to calculate Incremental energy generation (EGy). The baseline emission calculation is not mentioned in PDD.	B.5.1
Date: 13/09/2007 [Comment Client] The calculations of the incremental energy generation and baseline emission calculation are now mentioned clearly in section B.6.3 of the PDD.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD section B.6.3 is mentioning the incremental energy generation and baseline emission calculations clearly and according to methodology hence this was accepted and CAR19 could be closed. [Acceptance and close out] OK CAR19 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
20	CAR	The approved Consolidated methodology ACM0006 version 4 is applied correctly. The PDD mentions the formulas as per the methodology. The calculations are not shown in the PDD.	B.5.2
Date: 13/09/2007 [Comment Client] The calculations of the emission reductions are now mentioned clearly in section B.6.3 of the PDD. The detailed calculations are provided in the excel sheet that would be submitted as appendix to the PDD.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD is mentioning the emission reduction calculations clearly. Hence CAR20 could be closed out. [Acceptance and close out] OK CAR20 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
21	CAR	The approved Consolidated methodology ACM0006 version 4 is applied correctly. The PDD mentions the formulas as per the methodology. The calculations are not shown in the PDD.	B.5.3
Date: 13/09/2007 [Comment Client] The calculations of the emission reductions are now mentioned clearly in section B.6.3 of the PDD. The detailed calculations are provided in the excel sheet that would be submitted as appendix to the PDD.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD is mentioning the emission reduction calculations clearly. Hence CAR21 could be closed out. [Acceptance and close out] OK CAR21 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
22	CAR	The scenario used for the baseline is not mentioned in section B.6.1 of PDD. The PDD mentions that it is using ACM002 for calculation of baseline emission factor calculation but the calculation or the emission factor is not mentioned in	B.5.5

		section B.6.1 of PDD. The documentary proof for the same needs to be provided by the project proponent.	
Date: 13/09/2007 [Comment Client] The revised PDD now includes the scenario used (scenario 14) in section B.6.1. The baseline emission factor calculation method and the actual emission factor used are now mentioned in B.6.1 of the PDD. The emission factor is based on the Central Electricity Authority (CEA) CO_2 database. The web-link for the same is now included in Annex 3 of the PDD.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD is mentioning the scenario used along with the emission factor. This was accepted and hence CAR22 could be closed. [Acceptance and close out] OK CAR22 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
23	CAR	The uncertainty in the GHG emission estimation is not mentioned in section 6.1 of PDD.	B.5.6
Date: 13/09/2007 [Comment Client] Data uncertainties and procedures to deal with it are now included for each of the monitored parameters in Annex 4 of the PDD.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD is mentioning the uncertainty in Annex 4. hence CAR23 could be closed [Acceptance and close out] OK CAR23 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
24	NIR	The project uses ex-ante for calculation of emission factor. The emission factor for the grid is considered as 0.86 tCO2 / MWh. Proof for the same needs to be provided. The parameters mentioned for Project emissions and Leakage are also mentioned in the PDD but the proof is not provided for the same.	B.6.1
Date: 13/09/2007 [Comment Client] For baseline emission factor, data is referred from the CO_2 database of Central Electricity Authority (CEA). The CEA has calculated the emission factor inline with ACM0002 version 06. For the southern regional grid, the combined margin emission factor is 0.86 tCO2/MWh as in the database. For project emissions, data from Bureau of Energy Efficiency (BEE) and truck operators are obtained. Copies of the same would be provided. Leakage is not applicable to the project activity as per scenario 14 of ACM0006 version 04.			
Date: 19-10-2007 [Pankaj Mohan] The justification provided was checked in revised PDD along with the proofs. This was accepted and hence NIR24 could be closed. [Acceptance and close out] OK NIR24 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
25	NIR	There is no mention of source of data from where the baseline emission factor and parameters for Project emissions and leakage is taken.	B.6.2
Date: 13/09/2007 [Comment Client] The source and references for the data used for baseline emission factor and project emissions are now mentioned clearly in section B.6.1 and B.6.3 of the revised PDD. Leakage is not applicable to the project activity as per scenario 14 of ACM0006 version 04.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD received was checked and found OK. Hence NIR25 could be closed [Acceptance and close out] OK NIR25 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
26	NIR	The approved Consolidated methodology ACM0006 version 4 is applied correctly. The PDD mentions the formulas as per the methodology. The spread sheet for the calculations need to be provided by the PP.	B.7.1
Date: 13/09/2007 [Comment Client] The excel sheet for the calculation of emission reductions is being submitted to the DOE. This may be submitted as appendix to the PDD.			
Date: 19-10-2007 [Pankaj Mohan] The calculation sheet received was found to be in order and as per CEA published documentation. Hence NIR26 could be closed. [Acceptance and close out] OK NIR26 closed.			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
27	NIR	The PDD mentions the formulas used as per methodology but does not show the ER calculations in transparent manner in the PDD as this cannot be reproduced by the reader.	B.7.2
Date: 13/09/2007 [Comment Client] The section B.6.3 of the PDD is now revised as per the CDM EB's guidance to complete the PDD. The section now contains transparent ex-ante calculation of project emissions and baseline emissions applying relevant equations in the approved methodology ACM0006. The calculations are now provided in a transparent and reproducible manner in PDD version 03 dated 13.09.07. A detailed excel sheet of the calculations are provided as appendix to the PDD for easy reference.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD is received and found to be OK. Hence NIR27 could be closed [Acceptance and close out] OK NIR27 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
28	NIR	The historic consumption data mentioned in PDD section 6.2 needs to proved by providing documentary proof.	B.7.4
Date: 13/09/2007 [Comment Client] The historic energy consumption data mentioned in section B.6.2 of the PDD would be supported with consolidated annual energy reports. These annual reports have been prepared based on monthly energy reports. The monthly reports have been prepared based on metered energy data from the log books. The DOE has verified sample log book figures with the monthly and annual reports during the Validation site visit. Copies of annual and monthly energy reports are being submitted to the DOE. It may be noted that in the pre-project scenario the entire quantity of energy generated was consumed captively. The historic bagasse consumption data would be supported with the following documents: Consolidated monthwise fuel report for the years calculated based on the daily cogeneration reports. The daily cogen reports have been prepared based on recorded data from the fuel log books. . The DOE has verified sample log book figures with the daily and monthwise annual reports during the Validation site visit. Copies of monthwise annual reports and daily cogen reports are being submitted to the DOE.			
Date: 19-10-2007 [Pankaj Mohan] The query is for historic consumption and reply is for energy generation. Please clarify [Acceptance and close out] Open			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
29	NIR	The information provided for each monitoring parameter in section B.7.1 of PDD is not detailed enough to establish that the verification will be easy for this monitoring plan	B.10.5

Date: 13/09/2007 [Comment Client] The section B.7.1 and Annex 4 of the PDD has been now elaborated to include information for each parameter so that verification will be easy for this project activity.
Date: 19-10-2007 [Pankaj Mohan] The revised PDD is mentioning the monitoring parameter clearly and as per methodology. Hence NIR29 could be closed [Acceptance and close out] OK NIR29 closed

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
30	CAR	The QA/QC procedures for each parameter are missing in section B.7.1, B.7.2, and Annex 4 of PDD.	B.10.6
Date: 13/09/2007 [Comment Client] Detailed QA/QC procedures for each parameter are now included in section B.7.1 and Annex 4 of the revised PDD.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD is mentioning about the QA/QC procedures for each parameter. Hence CAR30 could be closed [Acceptance and close out] OK CAR30 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
31	NIR	Uncertainty of data is not mentioned in PDD.	B.11.2
Date: 13/09/2007 [Comment Client] Data uncertainties and procedures to deal with it are now included for each of the monitored parameters in Annex 4 of the PDD.			
Date: 19-10-2007 [Pankaj Mohan] Annex 4 of revised PDD mentions the uncertainty of each parameter hence NIR31 closed. [Acceptance and close out] OK NIR31 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
32	NIR	Data manipulations at site which will provide conflict of interest and may give rise to intended or unintended emissions which may results in overestimating emission reductions is not mentioned in PDD and it will also depends on the uncertainty of each parameter.	B.11.5
Date: 13/09/2007 [Comment Client] The section B.7.1 of the revised PDD now includes description of potential conflict of interest that may result in overestimating emission reductions. This is described for the monitoring parameters.			
Date: 19-10-2007 [Pankaj Mohan] Section B.7.1 of revised PDD mentions this and hence NIR32 could be closed. [Acceptance and close out] OK NIR32 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
33	CAR	The authority and responsibility of project management is not defined in the PDD.	B.12.1
Date: 13/09/2007 [Comment Client] The authority and responsibility of project management is now defined in Annex 4 of the PDD with details of the CDM Team responsible for the project management. A diagrammatic representation of the same is also provided.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD provided was checked and found to be correctly mentions the authority and responsibility.			

Hence CAR33 could be closed. [Acceptance and close out] OK CAR33 closed

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
34	CAR	The authority and responsibility for registration and measurement is not defined in the PDD.	B.12.2
Date: 13/09/2007 [Comment Client] The authority and responsibility for registration and monitoring/monitoring are now clearly defined in the Annex 1 and Annex 4 of the revised PDD.			
Date: 19-10-2007 [Pankaj Mohan] Annex 4 of revised PDD mentions this and hence CAR34 could be closed. [Acceptance and close out] OK CAR34 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
35	CAR	There is no mention of training of monitoring personnel in PDD. Proof for training needs to be provided by PP.	B.12.3
Date: 13/09/2007 [Comment Client] The procedures for training of monitoring personnel are now included in Annex 4 of the revised PDD. The training on monitoring of CDM parameters would be provided to the personnel before the start of the crediting period.			
Date: 19-10-2007 [Pankaj Mohan] The revised PDD mentions this and hence CAR35 could be closed [Acceptance and close out] OK CAR35 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
36	CAR	1. The PDD is not addressing the unique feature of CDM project activity. 2. It is also not mentioning the measures to be implemented for monitoring all parameter required, including measures to be implemented for ensuring data quality. 3. Monitoring plan does not provide any information on monitoring equipment and respective positioning in order to safeguard a proper installation 4. This is mentioned in responsibilities in Annex 4 of PDD but there is no procedure for the calibration. 5. There is no procedure identified for maintenance of monitoring equipment. 6. Day to day record handling is not mentioned in PDD Annex 4. 7. procedures are not identified to deal with possible data adjustments and missing data. 8. There is no internal audit procedure mentioned in PDD annex 4. 9. There is no procedures identified for project performance reviews before data is submitted for verification, internally or externally.	B.13.1 TO B.13.9
Date: 13/09/2007 [Comment Client] Please find below the point wise replies to the above queries: 1. The monitoring plan in section B.7.1 and Annex 4 of the PDD are now revised to elaborate on the measures to be implemented for monitoring all parameters taking care of the unique features of the project activity. 2. The monitoring plan in section B.7.1 and Annex 4 of the PDD are now revised to elaborate on the measures to be implemented for monitoring all parameters and ensuring data quality. 3. The monitoring plan now covers information on monitoring equipment used for each parameter. 4. Procedure for calibration of equipments involved are now specified for each of the parameters in Annex 4			

of the revised PDD. 5. Procedures for maintenance of monitoring equipments are now covered in the monitoring plan. 6. Day to day record handling procedures are now specified for each of the parameters in Annex 4 of the revised PDD. 7. Procedures for dealing with possible data adjustments are now established and included in Annex 4 of the revised PDD. 8. Procedures for internal audit of the monitored parameters are now established and included in Annex 4 of the revised PDD. 9. Procedures for project performance reviews are now established and included in Annex 4 of the revised PDD.
Date: 19-10-2007 [Pankaj Mohan] The Revised PDD Annex 4 mentions this and hence CAR36 could be closed [Acceptance and close out] OK CAR36 closed

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
37	CAR	It is not consistent with time line of the PDD history. It is not evident why this project is coming up so late though it started its operation around 2004. There is no justification of this delay mentioned in PDD and there was no documentary proof or reason for delay provided to the validator during the site visit. Please justify with documentary evidences.	B.14.2
Date: 13/09/2007 [Comment Client] The BASL Board approved the new cogeneration project proposal considering the CDM benefits and subsequently the construction activity commenced on 05 March 2001. The project activity has started operation in August 2002. BASL engaged a CDM consultant during year 2003. The host country approval for the project was obtained in February 2005. However, the formal CDM process could commence only in 2006 due to the absence of an appropriate methodology. After the approval of ACM0006 in March 2006, the Validation of the project activity commenced in April 2006. Copies of supporting proofs for the above are being submitted to the DOE. • Copy of documentary proof for appointment of consultant • Copy of proof for appointment of Validator			
Date: 19-10-2007 [Pankaj Mohan] The justification along with documentary proofs was accepted after reviewing it. Board approval is received Hence CAR37 coulkd be closed [Acceptance and close out] OK CAR37 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
38	CAR	The start date of project activity mentioned is 27-03-2001 but the proof for this need to be provided. The operational life time is defined as 20 years which is reasonable.	C.1.1
Date: 13/09/2007 [Comment Client] BASL placed the purchase orders of the TG and boiler to BHEL on 27.03.2001. Copies of the same are being submitted to the DOE. The contract for supply of TG and boiler were signed on 05.03.2001. Therefore, the start date is now changed to 05.03.2001 in the revised PDD.			
Date: 19-10-2007 [Pankaj Mohan] PO copies along with contract copies received and reviewed and found that start date of project activity is 05-03-2001 which is also mentioned in revised PDD. Hence CAR38 could be closed. [Acceptance and close out] OK CAR38 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
39	NIR	State Pollution Control Board Clearance copy need to be provided	D.1.3
Date: 13/09/2007			

[Comment Client] The latest TNPCB consents for Water and Air are being submitted.
Date: 19-10-2007 [Pankaj Mohan] TNPCB copies received and found to be in order hence NIR39 could be closed [Acceptance and close out] OK NIR39 closed

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
40	NIR	Yes, the PP has gone through stake holder (SH) consultation process. The identified stake holders were Local cane growers association, elected body of representatives (Local panchayat), Karnataka Pollution control board, TNEB. The SH expressed their support for the project activity through written communication. Copy of the same need to be provided to the validator.	E.1.1
Date: 13/09/2007 [Comment Client] The stakeholders have expressed their support and appreciation for the project activity. Certificates received from them are being submitted to the DOE.			
Date: 19-10-2007 [Pankaj Mohan] TNEB, Panchayat NOC along with PPA copies received and found to be in order. Hence NIR40 could be closed. [Acceptance and close out] OK NIR40 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
41	NIR	No clear information provided in the PDD about the media used for inviting comments. Please provide information on Media used for invitation of SH and Copies of comments received	E.1.2
Date: 13/09/2007 [Comment Client] BASL invited all the stakeholders for a consultation meeting by mailing individual invitation letters. Copy of the invitation letters sent to them and comments received are being submitted to the DOE. The invitation letters were sent more than a week in advance of the meeting. The stakeholder meeting was conducted on 04.09.2003 at the sugar plant conference hall. The minutes of the meeting is also being submitted.			
Date: 19-10-2007 [Pankaj Mohan] MOM along with attendance sheet received and also checked from the local stakeholders during site visit. Hence this was accepted and NIR41 could be closed [Acceptance and close out] OK NIR41 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
42	NIR	Copies of NOC issued by TNPCB & Environmental consent for Water and Air.	E.1.3
Date: 13/09/2007 [Comment Client] The copies of TNPCB consent received for the altered discharge of water and air (dated 16.10.2002) is being submitted. The latest TNPCB consents for Water and Air are also being submitted.			
Date: 19-10-2007 [Pankaj Mohan] The copies received were checked and found to be OK hence NIR42 could be closed [Acceptance and close out] OK NIR42 closed			

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
43	NIR	Copies of the communication received from the SH need to be provided to the validator	E.1.5
Date: 13/09/2007 [Comment Client] The local stakeholders have provided their written response on their opinion of the project activity. Copies of the letters received from the various stakeholders are now being submitted to the DOE.			

Date: 19-10-2007 [Pankaj Mohan] The local stakeholder comments received were provided and reviewed. These were found to be in order and hence NIR43 could be closed [Acceptance and close out] OK NIR43 closed

Date: 18-07-2007 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
44	NIR	No reference of comments from the SH is mentioned in the PDD and the efforts PP is taking to address those comments.	E.1.6

Date: 13/09/2007
[Comment Client] The comments received from the stakeholders are now included in section E.2 of the PDD. All the stakeholders were appreciative and provided positive comments on the project and therefore no corrective action or effort were necessary to address them. One query raised by the Head-Village panchayat was answered as below:
Query: “How is the air pollution in the area reduced by the project activity?”

BASL response: “In the old low pressure cogeneration set up, rotary air valves (RAV) were present to reduce the particulate matter escaping from the flue gas. These RAVs cannot control fine particles and as a result lot of dust particles and unburnts escaped with flue gas and settled as deposits in the near by areas. However, in the new project activity, latest Electro Static Precipitators (ESPs) are installed. The ESPs collect even fine particles from the flue gas and drastically reduces solid particles in the out going flue gas ”

Date: 19-10-2007 [Pankaj Mohan] The revised PDD received is mentioning the SH comments in detail. This was accepted and hence NIR44 could be closed. [Acceptance and close out] OK NIR44 closed.

Observations:

11. Annex 4: Statement of Competence of Validation Team

Name: _____ SGS Affiliate: _____

Deleted: Pankaj Mohan

Deleted: 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: _____ Date: _____

Deleted: Marco van der Linden

Deleted: 03-04-07

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