
VERIFICATION AND CERTIFICATION REPORT

Ganpati Sugar Industries Limited

**Ganpati co-generation project at
Medak, Andhra Pradesh**

UN PA – 0370

**MP1 of Crediting Period 2 from 01/01/2010 to
24/06/2012**

(both the days included)

SGS Climate Change Programme

SGS United Kingdom Ltd
SGS House
217-221 London Road
Camberley Surrey
GU15 3EY
United Kingdom

Date of Issue:		Project Number:	
16/12/2013		CDM.VER0161 MP1 of CP2	
Project Title:			
Ganpati co-generation project at Medak, Andhra Pradesh			
Organisation:		Client:	
SGS United Kingdom Limited		Ganpati Sugar Industries Limited	
Publication of Monitoring Report:			
Monitoring Period:		01/01/2010 to 24/06/2012	
First Monitoring Version and Date:		Version 1, 06/10/2012	
Final Monitoring Version and Date:		Version 12, 14/11/2013	
Summary:			
<p>SGS United Kingdom Ltd has performed the first periodic verification of second crediting period of the CDM project Ganpati co-generation project at Medak, Andhra Pradesh, with UNFCCC reference number of 0370, registration date of 29/08/2006 and Crediting Period Renewal date of 12/08/2011 and current (second) crediting period from 01/01/2010 to 31/12/2016. The verification includes confirming the implementation of the monitoring plan of the registered PDD Version 5 dated 23/11/2010, revised PDD Version 8 dated 14/11/2013 and the application of the monitoring methodology as per AMS I.C, Version 17 dated 28/05/2010. A site visit was conducted to verify the data submitted in the monitoring report. SGS confirms the following has been reviewed:</p> <ul style="list-style-type: none"> (a) The registered PDD including the monitoring plan and the corresponding validation report, revised PDD Version 8 dated 14/11/2013 ; (b) Monitoring report; (c) The applied monitoring methodology; (d) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board; (e) All information and references relevant to the project activity's resulting in emission reductions. <p>This project activity is a grid connected bagasse based co-generation power plant. This project activity uses a steam rankine cycle with a high pressure boiler with 55TPH capacity at 67kg/cm² and 480°C and a turbogenerator with 15 MW capacity. The electricity generated by using this co-generation plant has been used for captive purposes and the excess electricity generated has been exported to the grid. The electricity exported to the grid by this project activity is considered for the emission reduction purposes</p> <p>SGS confirms that the project is implemented in accordance with the validated and registered Project Design Document, and the revised PDD Version 8 dated 14/11/2013 (being submitted along with this RFI). The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 72,759 tCO₂e emission reductions during the period 01/01/2010 up to 24/06/2012.</p>			
Subject:			
CDM Verification			
Verification Team:			
C.Muthamil Kumaran – Lead Assessor & Local Assessor Sauvik Banerjee – Sectoral Scope Expert (TA 1.1)		<input checked="" type="checkbox"/> No Distribution (without permission from the Client or responsible organisational unit) <input type="checkbox"/> Limited Distribution <input type="checkbox"/> Unrestricted Distribution	
Technical Review:			
Date: 16/12/2013 Name: Vikas Bankar			
Authorised Signatory:			
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Abbreviations

APTRNASCO	Andhra Pradesh Transmission Corporation
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO ₂	Carbon Dioxide
COP/MOP	Conference of Parties serving as the Meeting of Parties to Kyoto Protocol
DCS	Distributed Control System
DG	Diesel Generator
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EB	Executive Board
ER	Emission Reduction
ETDC	Electronics Test & Development Centre
FAR	Forward Action Request
GHGs	Green House Gas(es)
GSIL	Ganpati Sugar Industries Limited
IPCC	Inter Governmental Panel on Climate Change
JMR	Joint Meter Reading
kWh	Kilo Watt Hour
MP	Monitoring Period
MR	Monitoring Report
MT	Metric Tonne
MWh	Mega Watt Hour
NCV	Net Calorific Value
PDD	Project Design Document
PP	Project Participant
QA/QC	Quality Assurance/Quality Plan
RCP	Renewal of Crediting Period
SG	Southern Grid
TPH	Tonnes per hour
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation Verification Standard

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1. Introduction

1.1 Objective

SGS United Kingdom Ltd has been contracted by Ganpati Sugar Industries Limited (one of the project participants of the project) to perform an independent verification of its CDM project "Ganpati co-generation project at Medak, Andhra Pradesh". CDM projects must undergo periodic audits and verification of emission reductions as the basis for issuance of Certified Emission Reductions (CERs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The emissions report conforms with the requirements of the monitoring plan in the registered PDD and the approved methodology; and
- The data reported are complete and transparent.

1.2 Scope

The scope of the verification is the independent and objective review and ex post determination of the monitored reductions in GHG emission by the project activity. The verification is based on the validated and registered project design document and the monitoring report. The project is assessed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance.

SGS has, based on the recommendations in the Validation and Verification Standard, employed a risk-based approach in the verification, focusing on the identification of significant reporting risks and the reliability of project monitoring.

Due professional care has been exercised and ethical conduct has been followed by the assessment team during the verification process. The verification report is a fair presentation of the verification activity.

The verification 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 Project Activity and Period Covered

This engagement covers emissions and emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the following project and period.

Title of Project Activity: Ganpati co-generation project at Medak, Andhra Pradesh

UNFCCC Registration Number: 0370

Monitoring Period Covered in this Report: 01/01/2010 to 24/06/2012

Project Participants: Host Country: Ganpati Sugar Industries Limited (India)

Annex I Country:

Noble Carbon Credits Limited (United Kingdom of Great Britain and Northern Ireland)

Vitol S.A. (Switzerland)

Location of the Project Activity: Kulbagur, Fasalwadi village, Sanga Reddy Mandal, Medak District, Andhra Pradesh, India. Latitude 17 ° 38'17" N and longitude 78 ° 7 '17" E.

This project activity is a grid connected biomass based co-generation power plant. This project activity uses a steam rankine cycle with a high pressure boiler 55TPH capacity at 67kg/cm² and 480°C and a turbogenerator with 15 MW capacity. The electricity generated by using this co-generation plant has been used for captive purposes and the excess electricity generated has been exported to the grid. The electricity exported to the grid by this project activity is considered for the emission reduction purposes.

2. Methodology

2.1 General Approach

SGS performs the verification work using a Periodic Verification Checklist prepared following the VVS. The Periodic Verification Checklist describes the verification approach and the sampling plan.

The checklist gives the assessment team a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the monitoring report.

Using the Periodic Verification Checklist, SGS verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question. This involved a site visit and a desk review of the monitoring report. This verification report describes the findings of this assessment.

Only verification activities undertaken after the publication of the monitoring report on the UNFCCC CDM website were used as a basis for SGS to conclude our verification and submit a request for issuance of CERs to the Board.

2.2 Verification Team for this Assessment

A team of competency has been selected to perform the verification of the project.

Name	Role
C.Muthamil Kumaran	Lead Assessor & Local Assessor
Sauvik Banerjee	Sectoral Scope Expert (TA 1.1; Thermal energy generation from fossil fuels and biomass including thermal electricity from solar)

2.3 Means of Verification

2.3.1 Review of Documentation

The validated PDD, revised PDD and the monitoring report submitted by the client and additional background documents related to the project performance were reviewed. A complete list of all documents reviewed is attached in section 8 of this report.

2.3.2 Site Visits

As part of the verification, the following on-site inspections have been performed by members of the assessment team present in the team at the time of site visit.

Location: Sanga Reddy Mandal, Medak District, Andhra Pradesh	
Date: 31/10/2012 & 01/11/2012	
Coverage:	Source of Information / Persons Interviewed
Performance Records	Mr.A.G Dhananjayan, Chief Executive (W) Mr. V. Manohar Rao, AGM (Power Plant)
Roles and responsibility	Performance Reporting Procedures. Mr.A.G Dhananjayan, Chief Executive (W) Mr. V. Manohar Rao, AGM (Power Plant)
Quality Assurance – Management and operating System	Internal Audit procedure/ Internal Audit records. Mr.A.G Dhananjayan, Chief Executive (W) Mr. V. Manohar Rao, AGM (Power Plant)
Emission Reduction Calculation	Mr.A.G Dhananjayan, Chief Executive (W) Mr. V. Manohar Rao, AGM (Power Plant)

2.4 Reporting of Findings

As an outcome of the verification 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 team shall raise a Clarification Request (CL) specifying what additional information is required.

Where a non-conformance arises the team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- I. Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- II. Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- III. Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- IV. Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants

The verification process may be halted until this information has been made available to comply with the requirements of the CDM Executive Board. Failure to address a CL may result in a CAR. Information or clarifications provided as a result of a CL may also lead to a CAR.

A clarification request (CL) will be raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. All CARs and CLs raised during verification shall be resolved prior to submitting a request for issuance.

Corrective Action Requests and Clarification Requests are raised in the Periodic Verification Checklist. The Project Developer is given the opportunity to “close” outstanding CARs and respond to CLs.

Forward Action Requests (FARs) may be raised during verification for actions where the monitoring and reporting require attention and/or adjustment for the next verification period, which are for the benefit of future projects and future verification activities. These have no impact upon the completion of the verification activity.

All CARs, CLs and FARs for this verification period are included in this report.

2.5 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 Review Team. The task of the Technical Review Team 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.

Technical Review Team

Name	Role
Vikas Bankar	Technical Reviewer
Shivaji Chakraborty	Sectoral Scope Expert (TA 1.1; Thermal energy generation from fossil fuels and biomass including thermal electricity from solar)

3. Verification Findings

3.1 Project Implementation

This project activity is a grid connected bagasse based co-generation power plant. This project activity uses a steam Rankine cycle with a high pressure boiler 55TPH capacity at 67kg/cm² and 480°C and a turbogenerator with a 15 MW capacity. The electricity generated by using this co-generation plant has been used for captive purposes and the excess electricity generated has been exported to the grid. The electricity exported to the grid by this project activity is considered for the emission reduction purposes.

The following has been checked to verify the applicability of the methodology to the project activity.

The project activity is a 15 MW bagasse based co-generation system which exports electricity to the regional grid (Southern Grid). The project was implemented and equipment installed as described in the registered PDD Version 5 dated 23/11/2010 and the revised PDD Version 8 dated 14/11/2013.

The project has been implemented as per the registered PDD and the revised PDD Version 8 dated 14/11/2013 (being submitted along with this RFI), this has been verified by the following means:

1. The co-generation plant capacity has been confirmed during the site visit and the PPA^{/7/}, Commissioning Letter^{/8/}, Consent to Operate^{/9/} and Turbogenerator supply contract^{/9.1/}.
2. Bagasse is the fuel used in the co-generation plant as confirmed from the plant records^{/10/}.
3. The project activity supplies electricity to the Transmission Corporation of Andhra Pradesh Limited (APTRANSCO) which is part of regional grid (Southern Grid) of India as checked and confirmed from the JMR and Invoice^{/11/}.

This is the 1st periodic verification of the second crediting period for the monitoring period from 01/01/2010 to 24/06/2012. The start date of this monitoring period is the start date of the second crediting period and the following day after the end date of the first crediting period as referred from <http://cdm.unfccc.int/Projects/DB/SGS-UKL1146080365.67/view>. The project is implemented as per the registered PDD Version 5 dated 23/11/2010 and the revised PDD^{/1B/}. The monitoring parameters and the monitoring approach discussed in the final MR^{/5/} were found consistent with the registered PDD and the revised PDD^{/1B/} (being submitted along with this RFI).

The description and value of ex-ante parameters NCV_{diesel} and EF_{diesel} as described in the final MR^{/5/} found consistent with the revised PDD^{/1B/} (being submitted along with this RFI as per the provision of Appendix 1 of CDM Project Standard Version 5.0). Please refer section 3.2.2 of this report for the corrections done on the above ex-ante fixed parameters, which does not have any impact on the project design.

QA/QC procedures are found consistent with the registered PDD^{/1/} and the revised PDD^{/1B/}. The project is registered against the approved methodology AMS.I.C, Version 17. The final MR^{/5/} is found consistent with the approved methodology AMS.I.C, Version 17. The project boundary is found consistent with the registered PDD and the revised PDD^{/1B/}. No other additional GHG sources were found to be attributed to the project activity, which are not covered in the existing project boundary or monitoring plan.

The reported emission reductions in the current monitoring period are lower than the estimated emission reductions in the registered PDD for the same period. The apportioned emission reduction comes to 116,613 tCO₂ for the period 01/01/2010 to 24/06/2012 (906 days) as per the estimation made in the registered PDD (46,980 per annum). The actual emission reduction has been verified as 72,759 tCO₂ for the same period. The difference between the actual CERs generated by the project activity and the estimated CERs as per the registered PDD are 37.6% lower. The reason has been explained in section E.6 of the MR v1 and the final version of MR^{/5/} as being caused by a reduced availability of sugar cane during the monitoring period under consideration. As checked from the registered PDD, the revised PDD^{/1B/} and the final ER sheet^{/6/} the total net export estimated from the project activity was 54,523 MWh per annum however the actual net export achieved during this monitoring period of 906 days is only 84,449 MWh. Thus the reason explained is found to be appropriate.

3.2 Post registration changes

3.2.1 Temporary deviations from registered monitoring plan or applied methodology

There is no deviation request applied to this monitoring period.

3.2.2 Corrections

There are corrections to the project parameters fixed at validation during the current monitoring period and the corrections are discussed below:

- The NCV value of diesel (NCV_{diesel}) has been corrected in line with the tool “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion”, Version 2 (EB41 Annex11) in the revised PDD^{1B/} and the ER sheet version 4 dated 04/09/2013^{1B/} are submitted along with this request for issuance.

As checked from the project webpage <http://cdm.unfccc.int/Projects/DB/SGS-UKL1146080365.67/view> the registered PDD version 5 dated 23/11/2010^{1/} (for the renewal of crediting period) erroneously mentioned the value of the parameter NCV_{diesel} as 43 GJ/ton in section B.6.2 instead of 43.3 GJ/ton. It is to be noted that the value of the parameter NCV_{diesel} had been considered as 43.3 GJ/ton as checked from the approved RMP^{3/} (approved on 20/10/2010) which was applicable for the CP1. Also the description of the parameter “NCV diesel” was not explicit i.e description in the registered PDD version 5 dated 23/11/2010^{1/} is not clearly describing that the “upper limit value of the uncertainty at a 95% confidence interval as per the Table 1.2 of Chapter 1 of Vol.2 (energy) of the 2006 IPCC” value has been considered. Thus the description of NCV_{diesel} has also been corrected now in the revised PDD^{1B/} (being submitted along with this RFI as per the provision of Appendix 1 of CDM Project Standard Version 5.0).

It is to be noted that as per the tool “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion”, Version 2 (EB41 Annex11), in case of considering IPCC default values for the parameter $NCV_{i,y}$ (in the project case the fuel type is Diesel), “IPCC default values at the upper limit of the uncertainty at a 95% confidence interval as provided in Table 1.2 of Chapter 1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories”. As per Table 1.2 of Chapter 1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories the upper limit for the fuel Diesel is 43.3 TJ/Gg i.e 43.3 GJ/ton. However the registered PDD version 5 dated 23/11/2010 indicates the value of the parameter NCV_{diesel} as 43 GJ/ton in section B.6.2. Thus this has been corrected in the revised PDD^{1B/} and ER sheet version 4 dated 04/09/2013^{1B/} as 43.3 GJ/ton in line with the tool.

- In this context it is also to be noted that as per the tool “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion”, Version 2 (EB41 Annex11) the value of the parameter “ $EF_{\text{diesel}} / EF_{\text{CO}_2,i,y}$ ” has been fixed ex-ante correctly as 0.0748 tCO₂/GJ in the registered PDD version 5 dated 23/11/2010^{1/} which is the upper limit value of the uncertainty at a 95% confidence interval as per the Table 1.4 of Chapter 1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories. However the description of the parameter “ $EF_{\text{diesel}} / EF_{\text{CO}_2,i,y}$ ” was not explicit i.e. description in the registered PDD version 5 dated 23/11/2010^{1/} is not clearly describing that the “upper limit value of the uncertainty at a 95% confidence interval as per the Table 1.4 of Chapter 1 of Vol.2 (energy) of the 2006 IPCC” value has been considered. Thus the description has been accordingly corrected now in the revised PDD^{1B/} (being submitted along with this RFI).

Paragraph 215 of the Project Standard Version 5 (dated 04/10/2013) refers “that any corrections to the project information or parameters fixed at validation as described in the registered PDD” the corrections shall be documented in the revised PDD. Also point no.1 of Appendix 1 of the Project Standard Version 5 dated 04/10/2013 refers that “any corrections to project information of a registered CDM project activity that do not affect the design of the project activity do not require prior approval by the Board”. Thus the assessment team is of the opinion that the changes made in the revised PDD^{1B/} and the ER sheet version 4 dated 04/09/2013^{1B/} with respect to correcting the value of the parameter NCV_{diesel} as 43.3 GJ/ton and making the description of the parameters “ NCV_{diesel} ” and “ $EF_{\text{diesel}} / EF_{\text{CO}_2,i,y}$ ” more explicit does not require prior approval in line with the paragraph 215 and point no.1 of Appendix 1 of “Clean development mechanism

Project Standard Version 5 dated 04/10/2013" as the corrections done to the parameter "NCV_{diesel}" fixed at validation and the corrections done to the description of the parameters "NCV_{diesel}" and "EF_{diesel} / EF_{CO2,i,y}" does not affect the design of the project activity however leads to a more conservative emission reduction (change in value from 43 to 43.3 GJ/ton for the parameter NCV_{diesel}) though its impact is very minimal (i.e. the project emissions increases only about 0.0555 tCO₂ for the current monitoring period considering the value of 43.3 GJ/ton for the parameter NCV_{diesel}) in the emission reduction calculation. The corrections are in accordance with the monitoring methodology and the tool "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion" Version 2 (EB 41 Annex 11). Please refer **CAR#4** in the Findings Overview for further details.

It is to be noted that this project is registered under the previous regulatory framework (VVM track), and the old information is transferred to the new VVS track form to revise the PDD and the verification team confirms that the material (information) included in the new form (i.e. VVS track registered PDD Version 5 dated 23/11/2010^{1.1/}) is materially the same as the information in the registered PDD version 5 dated 23/11/2010^{1/}.

3.2.3 Permanent changes from registered monitoring plan or applied methodology

There is no Revision in the Monitoring Plan request applied to this monitoring period.

3.2.4 Changes to project design of registered project activity

There is no change in the project design of the registered project activity during the current monitoring period.

3.2.5 Changes to start date of crediting period

This is the 1st periodic verification of second crediting period for the monitoring period from 01/01/2010 to 24/06/2012. The start date of this monitoring period is the start date of the second crediting period as well as being the following day after the end date of the first crediting period as referred from <http://cdm.unfccc.int/Projects/DB/SGS-UKL1146080365.67/view>.

3.3 Remaining Issues, CAR's, FAR's from Previous Validation or Verification

There are no pending issues, CAR & FAR in validation and this is first periodic verification of the 2nd Crediting Period. Also there are no pending issues from CP1.

3.4 Completeness and accuracy of Monitoring

3.4.1 Verification of monitoring of parameters

The monitoring of reductions in GHG emissions to result from the registered project have been implemented in accordance with the monitoring plan contained in the registered PDD Version 5 dated 23/11/2010 approved (renewal of crediting period) on 12/08/2011 and the revised PDD^{1B/}. The monitoring mechanism, including the data collection system, is effective and reliable.

1. Net electricity supplied to the grid by the project activity "EG_{BL,y}";

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the applicable methodology relevant Documents and EB	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan & applicable methodology.
Data/Parameter	EG _{BL,y} (MWh)	EG _{BL,y} (MWh)	EG _{BL,y} (MWh)	The implementation is in compliance with the

				registered Monitoring Plan & applicable methodology.
Description	Net electricity supplied to the grid by the project activity	Net electricity supplied to the grid by the project activity	Net electricity supplied to the grid by the project activity	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measured/Calculated /Default	Calculated from the measured/metered values.	Calculated from the measured/metered values.	Calculated from the measured/metered values.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Source of data	Not specified in the methodology.	Monthly JMR (Joint Meter Reading).	Monthly JMR (Joint Meter Reading).	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Monitoring equipment	Energy meters	Energy meters	Energy meters	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measuring/Reading/ Recording frequency	Continuous monitoring, hourly measurement and at least monthly recording.	Continuous monitoring, hourly measurement and at least monthly recording.	Continuous monitoring, hourly measurement and at least monthly recording.	The implementation is in compliance with the

				registered Monitoring Plan & applicable methodology.
Calculation method (if applicable)	No specific requirement as per the applied methodology	<p>The measured value of gross electricity exported to grid by the project activity and measured value of electricity imported to the project activity are used to arrive the net electricity exported to grid by the project activity.</p> <p>Total units exported to the grid and imported from the grid are measured by energy meters installed at APTRANSCO sub station on 24th day of every month and recorded by representatives of APTRANSCO (Grid operator) and project proponent (GSIL in a monthly Joint Meter Reading (JMR).</p> <p>$EG_{BL,y}$ = Electricity exported to the grid after meeting captive & auxiliary power requirements – Electricity Import from the grid.</p>	<p>The parameter Net Electricity Supplied to the Grid by the project activity (EGy) is calculated by subtracting the Electricity Import from the grid from the Electricity exported to the grid after meeting captive and auxiliary power requirements. Total units exported to the grid and imported from the grid are measured by using tri vector energy meter of 0.2 Class accuracy installed at APTRANSCO sub station on 24th day of every month and recorded by representatives of APTRANSCO (Grid operator) and project proponent (GSIL in a monthly Joint Meter Reading (JMR). Electricity supplied to the grid is monitored through main meter and check meter installed at the substation. The meters are under the control of APTRANSCO and are sealed by APTRANSCO. The measurement of this parameter has been done on hourly and recorded monthly. Joint Meter Reading (JMR) has been taken on a monthly basis and recorded by representatives of APTRANSCO (Grid operator) and project proponent (GSIL). The</p>	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.

			Net electricity supplied to the grid by the project activity is considered for emission reduction estimation. The value of the parameter Net Electricity Supplied to the Grid by the project activity (EGy) for the monitoring period under consideration was verified from the monthly JMR ^{/11/}	
QA/QC procedures	Measurement shall be using calibrated meters. Calibration shall be as per the relevant paragraphs of General Guidelines to SSC methodologies	Meters based with best accuracy procured from reputed manufacturers are calibrated to national standards. Recalibration frequency is either subject to appropriate intervals according to manufacturer specifications or with a minimum frequency of once a year. The parameter will be cross checked with the bills raised by the company as well as payment details by the grid operator.	The parameter Net Electricity Supplied to the Grid by the project activity (EGy) is calculated parameter. The calibration details of the energy meters which measured the gross export and import are discussed in detail in section 3.5 of this report.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.

2. Electricity exported to the grid after meeting captive & auxiliary power requirements during the year y, “EG_{export,y}”;

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the applicable methodology and relevant EB Documents	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan & applicable methodology.
Data/Parameter	Not specified in the methodology	EG _{export,y} (MWh)	EG _{export,y} (MWh)	The implementation is in compliance with the registered Monitoring Plan.

Description	Not specified in the methodology	Electricity exported to the grid after meeting captive & auxiliary power requirements during the year y	Electricity exported to the grid after meeting captive & auxiliary power requirements during the year y	The implementation is in compliance with the registered Monitoring Plan.
Measured/Calculated /Default	Not specified in the methodology	Measured	Measured	The implementation is in compliance with the registered Monitoring Plan.
Source of data	Not specified in the methodology	Monthly JMR (Joint Meter Reading)	Monthly JMR (Joint Meter Reading)	The implementation is in compliance with the registered Monitoring Plan.
Monitoring equipment	Not specified in the methodology	Energy meters	Energy meters	The implementation is in compliance with the registered Monitoring Plan.
Measuring/Reading/ Recording frequency	Not specified in the methodology	Continuous monitoring, hourly measurement and at least monthly recording.	The parameter Electricity exported to the grid after meeting captive and auxiliary power requirements is measured on hourly basis by using tri vector energy meter of 0.2 Class accuracy installed at APTRANSCO sub station on 24 th day of every month and recorded by representatives of APTRANSCO (Grid operator) and project proponent (GSIL in a monthly Joint Meter Reading (JMR). Electricity supplied to the grid is monitored through main meter and check meter installed at the substation. The meters are under the control of APTRANSCO and are sealed by APTRANSCO. Joint	The implementation is in compliance with the registered Monitoring Plan.

			Meter Reading (JMR) has been taken on a monthly basis and recorded by representatives of APTRANSCO (Grid operator) and project proponent (GSIL). The parameter Electricity exported to the grid is used for calculation of Net Electricity Supplied to the Grid by the project activity.	
Calculation method (if applicable)	Not specified in the methodology	Not Applicable	Not Applicable	Not Applicable
QA/QC procedures	Not specified in the methodology	Meters based with best accuracy procured from reputed manufacturers are calibrated to national standards. Recalibration frequency is either subject to appropriate intervals according to manufacturer specifications or with a minimum frequency of once a year. The parameter will be cross checked with the bills raised by the company as well as payment details by the grid operator.	<p>All the energy meters used for the monitoring period were calibrated on or before the due date of calibration. There was no delay in calibration of the energy meters. All energy meters were calibrated by Electronics Test & Development Centre, Hyderabad under the Department of Information Technology, Government of India^{/12/}.</p> <p>The calibration details of the energy meters which measured the gross export and import are discussed in detail in section 3.5 of this report.</p> <p>The invoice^{/11/} raised and payment details have been cross checked for the export values considered in the</p>	The implementation is in compliance with the registered Monitoring Plan.

			ER calculation and found appropriate.	
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3. Electricity import from grid to the project activity during the year y, “EG_{import,y}”;

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the applicable methodology and relevant EB Documents	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan & applicable methodology.
Data/Parameter	Not specified in the methodology	EG _{import,y} (MWh)	EG _{import,y} (MWh)	The implementation is in compliance with the registered Monitoring Plan.
Description	Not specified in the methodology	Electricity import from grid to the project activity during the year y	Electricity import from grid to the project activity during the year y	The implementation is in compliance with the registered Monitoring Plan.
Measured/Calculated /Default	Not specified in the methodology	Measured	Measured	The implementation is in compliance with the registered Monitoring Plan.
Source of data	Not specified in the methodology	Monthly JMR (Joint Meter Reading)	Monthly JMR (Joint Meter Reading)	The implementation is in compliance with the registered Monitoring Plan.
Monitoring equipment	Not specified in the methodology	Energy meters	Energy meters	The implementation is in compliance with the registered Monitoring Plan.
Measuring/Reading/ Recording frequency	Not specified in the methodology	Continuous monitoring, hourly measurement and at least monthly recording.	The parameter Electricity imported from the grid to the project activity is measured on hourly basis by using tri vector energy meter of 0.2 Class accuracy installed at APTRANSCO sub station on 24 th day of every month and recorded by representatives of APTRANSCO (Grid operator) and project proponent (GSIL in a monthly	The implementation is in compliance with the registered Monitoring Plan.

			<p>Joint Meter Reading (JMR). Electricity imported from the grid is monitored through main meter and check meter installed at the substation. The meters are under the control of APTRANSCO and are sealed by APTRANSCO. Joint Meter Reading (JMR) has been taken on a monthly basis and recorded by representatives of APTRANSCO (Grid operator) and project proponent (GSIL). The parameter Electricity imported from the grid is used for calculation of Net Electricity Supplied to the Grid by the project activity.</p>	
Calculation method (if applicable)	Not specified in the methodology	Not Applicable	Not Applicable	Not Applicable
QA/QC procedures	Not specified in the methodology	<p>Meters based with best accuracy procured from reputed manufacturers are calibrated to national standards. Recalibration frequency is either subject to appropriate intervals according to manufacturer specifications or with a minimum frequency of once a year. The parameter will be cross checked with the bills raised by the company as well as payment</p>	<p>All the energy meters used for the monitoring period were calibrated on or before the due date of calibration. There was no delay in calibration of the energy meters. All energy meters were calibrated by Electronics Test & Development Centre, Hyderabad under the Department of Information Technology, Government of India^{/12/}. The calibration details of the energy</p>	<p>The implementation is in compliance with the registered Monitoring Plan.</p>

		details by the grid operator.	<p>meters which measured the gross export and import are discussed in detail in section 3.5 of this report.</p> <p>The invoice^{11/} raised and payment details have been cross checked for the import values considered in the ER calculation and found appropriate.</p>	
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4. Quantity of bagasse used in the project activity, “ $B_{Biomass,y}$ ”;

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the applicable methodology and relevant EB Documents	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan & applicable methodology.
Data/Parameter	$B_{Biomass,y}$ (ton)	$B_{Biomass,y}$ (ton)	$B_{Biomass,y}$ (ton)	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Description	Net quantity of biomass consumed in year y	Quantity of bagasse used in the project activity	Quantity of bagasse used in the project activity	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measured/Calculated /Default	Measured/Estimated based on energy/mass balance that is based on purchased quantities and stock.	Estimated based on cane crushed, steam generation, bagasse production, open stock bagasse and closed stock bagasse etc.	Estimated based on cane crushed, steam generation, bagasse production, open stock bagasse and closed stock bagasse etc.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Source of data	Not specified in the methodology.	Plant records.	Plant records.	The implementation is in compliance with the registered Monitoring Plan & applicable

				methodology.
Monitoring equipment	Use volume or mass based measurements if applicable.	Not Applicable.	Not Applicable.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measuring/Reading/Recording frequency	Yearly	Yearly	Yearly	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Calculation method (if applicable)	Not specified in the methodology.	Estimated based on cane crushed, steam generation, bagasse production, open stock bagasse and closed stock bagasse etc.	This parameter for the monitoring period under consideration has been estimated based on cane crushed, bagasse production, open stock bagasse and closed stock bagasse etc. The cane crushed, bagasse generated open stock bagasse and closed stock bagasse and bagasse consumption in the co-generation plant have been checked and confirmed from the plant records ^{/10.1/} . The cane crushed and bagasse generated have been cross checked from the RT 8 C ^{/10.2/} and found appropriate.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
QA/QC procedures	If more than one type of biomass fuel is consumed, each shall be monitored separately.	Not applicable.	The only fuel (biomass) used in the cogeneration plant is bagasse as checked and confirmed from the	The implementation is in compliance with the registered Monitoring Plan & applicable

			plant records ^{/10/} .	methodology.
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5. Net calorific value of bagasse used in the project activity “ NCV_{bagasse} ”;

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the applicable methodology and relevant EB Documents	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan & applicable methodology.
Data/Parameter	NCV_{bagasse} (GJ/mass or volume)	NCV_{bagasse} (GJ/ton)	NCV_{bagasse} (GJ/ton)	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Description	Net calorific value of biomass residue type k used in the project activity	Net calorific value of bagasse used in the project activity	Net calorific value of bagasse used in the project activity	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measured/Calculated /Default	Measured in laboratories.	Measured in laboratories.	Measured in laboratory ^{/13/} .	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Source of data	Laboratory test results.	Laboratory test results.	Laboratory test results.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Monitoring equipment	Not specified in the methodology.	Not specified in the registered PDD.	Bomb Calorimeter.	The measuring equipment indicated in the MR as per the laboratory which

				conducted the NCV test and the same found to be appropriate. The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measuring/Reading/Recording frequency	Yearly	Yearly	Yearly	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Calculation method (if applicable)	Not Applicable.	Not Applicable.	Not Applicable.	Not Applicable
QA/QC procedures	Measurement in laboratories according to relevant national/international standards. Check the consistency of the measurements by comparing the measurement results with measurements from previous year, relevant data sources (e.g. values in the literature, values used in the national GHG inventory) and default values by the IPCC. If measurement results differ significantly from previous measurements of other relevant data sources, conduct additional measurements.	Measurement in laboratories according to relevant national/international standards.	Measured in laboratory according to relevant national/international standards. The consistency of the measurement checked with the previous year measurements and found that the results doesn't differ significantly.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.

6. Moisture content of bagasse used in the project activity, “Moisture_{bagasse}”;

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the applicable methodology and relevant EB Documents	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan & applicable methodology.
Data/Parameter	Moisture _{bagasse} (%)	Moisture _{bagasse} (%)	Moisture _{bagasse} (%)	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Description	Moisture content of the biomass residues	Moisture content of bagasse used in the project activity	Moisture content of bagasse used in the project activity	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measured/Calculated /Default	Measured.	Measured.	Measured.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Source of data	Not specified in the methodology.	Laboratory test results.	Laboratory test results ^{14/} .	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Monitoring equipment	Not specified in the methodology.	Not specified in the registered PDD.	Hot Air Oven and Balance.	The measuring equipment indicated in the MR as per the laboratory which conducted the moisture test and the same found to be appropriate. The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measuring/Reading/ Recording frequency	Monthly (The weighted average should	Monthly (The weighted average shall be	Monthly (The weighted average has been calculated	The implementation is in compliance with the registered

	be calculated for each monitoring period and used in the calculations).	calculated for each monitoring period as per the applied methodology).	and reported for the monitoring Period under consideration as per the applied methodology).	Monitoring Plan & applicable methodology.
Calculation method (if applicable)	Not Applicable.	Not Applicable.	Not Applicable.	Not Applicable
QA/QC procedures	In case of dry biomass, monitoring of this parameter is not necessary.	Not Applicable.	Not Applicable.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.

7. Quantity of diesel consumed in DG set for electricity generation used by project activity, “FC_{i,j,y} (Diesel)”;

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the applicable methodology and relevant EB Documents	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan & applicable methodology.
Data/Parameter	FC _{i,j,y} (mass or volume unit) (It is to be noted that the applied methodology refers the tool “Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion”)	FC _{i,j,y} (Diesel)	FC _{i,j,y} (Diesel)	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Description	Quantity of fuel type i combusted in process j during the year y	Quantity of diesel consumed in DG set for electricity generation used by project activity	Quantity of diesel consumed in DG set for electricity generation used by project activity	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measured/Calculated /Default	Measured	Measured	Measured	The implementation is in compliance with the registered

				Monitoring Plan & applicable methodology.
Source of data	Onsite measurements	Plant Records	Plant Records	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Monitoring equipment	Use either mass or volume meters. In cases where fuel is supplied from small daily tanks, rulers can be used to determine mass or volume of the fuel consumed, with the following Conditions: The ruler gauge must be part of the daily tank and calibrated at least once a year and have a book of control for recording the measurements (on a daily basis or per shift).	Diesel Tank with level gauge.	Diesel Tank with level gauge.	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Measuring/Reading/Recording frequency	Continuous	Continuous	Continuous	The implementation is in compliance with the registered Monitoring Plan & applicable methodology.
Calculation method (if applicable)	Not applicable	Not applicable	Not applicable	Not Applicable
QA/QC procedures	The consistency of metered fuel	The measuring equipment is calibrated at least	The measuring equipment has been calibrated once a	The implementation is in compliance with the registered

	<p>consumption quantities should be cross-checked by an annual energy balance that is based on purchased quantities and stock changes.</p> <p>Where the purchased fuel invoices can be identified specifically for the CDM project, the metered fuel consumption quantities should also be cross-checked with available purchase invoices from the financial records.</p>	<p>once a year. The consumption of diesel can be cross checked with the log books to find whether DG set is used for power generation. Mostly diesel is used in the DG sets for keeping them in better running condition and rarely diesel may be used for emergency purposes, the amount of electricity generation from the DG set and corresponding diesel consumption for electricity generation is monitored.</p>	<p>year. The calibration details are discussed in detail in section 3.5 of this report. The consumption of diesel has been checked from the log books^{/15.1/} and found that the diesel has been used in the DG set for trial run purpose only^{/15.2/} (to keep the DG set in better running condition) for the monitoring period under consideration. The diesel consumption have also been cross checked from the diesel DG set department issue slips^{/15.3/} and found correct. .</p>	Monitoring Plan & applicable methodology.
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Discussion of findings:

In section D.2 of the MR^{/4.1/} it was reported that the QA/QC procedures are not applicable for the parameters $EG_{BL,y}$ and $B_{Biomass,y}$ however as per the registered (RCP) PDD Version 5 dated 23/11/2010 the QA/QC procedures have been defined for these parameters. **Thus CL#2 was raised** requesting the PP to clarify. In response the PP clarified that $EG_{BL,y}$ is a calculated parameter and the same is calculated based on the measured parameters $EG_{export,y}$ & $EG_{import,y}$. And also the parameter $B_{Biomass,y}$ is an estimated parameter and not a measured parameter. Thus it has been indicated that the QA/QC procedures are not applicable for these parameters. As $EG_{BL,y}$ has been calculated from the measured parameters $EG_{export,y}$ & $EG_{import,y}$ and QA/QC procedure as defined in the RCP PDD has been followed for the parameters $EG_{export,y}$ & $EG_{import,y}$ thus the same has been accepted by the assessment team. Also as per the methodology the parameter $B_{Biomass,y}$ has to be measured continuously (using mass or volume based measurements and adjusted for moisture content) and/or estimated using annual mass/energy balance. The registered RCP PDD clearly indicates that this parameter is estimated based on cane crushed, steam generation, bagasse production and open, closing stock of bagasse thus the QA/QC procedure indicated in the registered RCP PDD is not applicable. **Thus CL#2 was closed.**

CAR#3 was raised for the following reasons;

1. It was not demonstrated that the independent laboratory which determined the parameters $NCV_{bagasse}$ and $Moisture_{bagasse}$ complied with the national quality standards as defined in the registered PDD^{/1/}.
2. The measuring frequency of the parameter $Moisture_{bagasse}$ is monthly as per the registered PDD^{/1/} however only annual values have been reported in the MR^{/4.1/}. Also calibration details of equipment measured this parameter have not been reported in the MR^{/4.1/}.
3. The header of the clean pdf version of the revised PDD (Version 8 dated 14/11/2013) submitted found to be inconsistent with respect to the PDD template (there was formatting error).

In response

1. The PP demonstrated with documentary evidences that the independent laboratory which determined the parameters $NCV_{bagasse}$ and $Moisture_{bagasse}$ complied with the national quality standards as defined in the registered PDD^{/1/}. It is to be noted that the independence of the lab has been confirmed from the entity who did the calibration of the measuring instruments of the lab and traceability of the calibration certificate leads to ETDC certified master calibrators thus the team accepted the same. Also the ETDC is a well known entity and the parameters are used to only to cross check and are not used in emission reduction calculation.
2. The PP reported the monthly measured values for the parameter $Moisture_{bagasse}$ in the ER Sheet^{/6/} and also substantiated the values reported with the laboratory test reports^{/14/}. It is to be noted that only for the season months the the parameter $Moisture_{bagasse}$ has been measured and reported. Also the calibration details of the equipments measured the parameters $NCV_{bagasse}$ and $Moisture_{bagasse}$ have been reported in the MR^{/5/}. The calibration details of the equipments reported in the MR^{/5/} are found to be appropriate as checked and confirmed from the calibration records^{/17 & 18/} of the respective equipments measured $NCV_{bagasse}$ and $Moisture_{bagasse}$.
3. In response the PP submitted the clean pdf version of revised PDD (Version 8 dated 14/11/2013) which found to be consistent with the PDD template as well as consistent with the track change version of revised PDD submitted with respect to the header formatting.

Thus CAR#3 was closed. Please refer CAR#3 in the Findings Overview for further details.

3.4.2 Verification of implementation of sampling plan

The implementation of sampling plan is not applicable as 100% data verification was done.

3.5 Accuracy of Equipment

The reporting procedures reflect the content of the monitoring plan. The monitoring mechanism is effective and reliable. The monitoring results are consistently recorded as per the frequency and the QA/QC procedures are followed as defined in the registered monitoring plan of the project activity. The monitoring instruments have been calibrated as per the frequency defined, except for the equipment which was used to measure the parameter “Moisture content of bagasse used in the project activity; “ $Moisture_{bagasse}$ ” and the details are described in this section of the verification report. Also it is to be noted that the parameter “Moisture content of bagasse used in the project activity; “ $Moisture_{bagasse}$ ” is not used in the emission reduction calculation.

Monitoring equipment	Main Meter
Monitoring parameter	Electricity exported to the grid after meeting captive & auxiliary power requirements during the year y ; “ $EG_{export,y}$ ” & Electricity import from grid to the project activity during the year y ; “ $EG_{import,y}$ ”.
S/N	01959480 (for the period 28/08/2009 to 09/08/2010 ^{/16/}) 01959478 (for the period 09/08/2010 to 25/07/2011 ^{/16/}) 01959480 (for the period 25/07/2011 to 03/07/2012 ^{/16/})
Type	Electronic Trivector Meter
Level	0.2S

Calibration frequency requirement	Once in a year
Calibration date	11/08/2009, 26/07/2010 & 04/07/2011 ^{/12.1/}
Validity	1 Year
Are there delays in calibration?	No
Calibration Entity	ETDC, Government of India
Accreditation Certificate for the calibration entity	<p>Department of Information Technology, Government of India,</p> <p>Reference of the master calibrator and its validity: 3 Phase Portable Test Meter with Phantom Load of manufacturer CALSTAT 400 PLE10A/100A HEG/EDI Germany with accuracy class of $\pm 0.02\%$ validity up to 21/11/2009 this confirms the validity of the calibration done on 11/08/2009.</p> <p>Reference of the master calibrator and its validity: 3 Phase Portable Test Meter with Phantom Load of manufacturer CALSTAT 400 PLE10A/100A HEG/EDI Germany with accuracy class of $\pm 0.02\%$ validity up to 26/11/2010 this confirms the validity of the calibration done on 26/07/2010.</p> <p>Reference of the master calibrator and its validity: 3 Phase Portable Test Meter with Phantom Load of manufacturer CALSTAT 400 PLE10A HEG/EDI Germany with accuracy class of $\pm 0.02\%$ validity up to 10/12/2011 this confirms the validity of the calibration done on 04/07/2011.</p>

Monitoring equipment	Check Meter
Monitoring parameter	<p>Electricity exported to the grid after meeting captive & auxiliary power requirements during the year y ; "EG_{export,y}"</p> <p>&</p> <p>Electricity import from grid to the project activity during the year y; "EG_{import,y}" .</p>
S/N	<p>03148278 (for the period 28/08/2009 to 09/08/2010^{/16/})</p> <p>01999438 (for the period 09/08/2010 to 25/07/2011^{/16/})</p> <p>03148278 (for the period 25/07/2011 to 03/07/2012^{/16/})</p>
Type	Electronic Trivector Meter
Level	0.2S
Calibration frequency requirement	Once in a year

Calibration date	11/08/2009, 26/07/2010 & 04/07/2011 ^{/12.2/}
Validity	1 Year
Are there delays in calibration?	No
Calibration Entity	ETDC, Government of India
Accreditation Certificate for the calibration entity	<p>Department of Information Technology, Government of India,</p> <p>Reference of the master calibrator and its validity: 3 Phase Portable Test Meter with Phantom Load of manufacturer CALSTAT 400 PLE10A/100A HEG/EDI Germany with accuracy class of $\pm 0.02\%$ validity up to 21/11/2009 this confirms the validity of the calibration done on 11/08/2009.</p> <p>Reference of the master calibrator and its validity: 3 Phase Portable Test Meter with Phantom Load of manufacturer CALSTAT 400 PLE10A/100A HEG/EDI Germany with accuracy class of $\pm 0.02\%$ validity up to 26/11/2010 this confirms the validity of the calibration done on 26/07/2010.</p> <p>Reference of the master calibrator and its validity: 3 Phase Portable Test Meter with Phantom Load of manufacturer CALSTAT 400 PLE10A HEG/EDI Germany with accuracy class of $\pm 0.02\%$ validity up to 10/12/2011 this confirms the validity of the calibration done on 04/07/2011.</p>

Monitoring equipment	Bomb Calorimeter (Equipment used in the Laboratory that measured the NCV of bagasse)
Monitoring parameter	Net calorific value of bagasse used in the project activity;" NCV _{bagasse} ".
S/N	23021
Type	Advance research Instruments/BCM
Level	Not Specified
Calibration frequency requirement	Once in a year
Calibration date	01/11/2009, 28/10/2010 & 25/10/2011 ^{/17/}
Validity	1 Year
Are there delays in calibration?	No
Calibration Entity	S.M Enterprises (Reg.No.RQ91/3144)
Accreditation Certificate for the calibration entity	ETDC

Monitoring equipment	Hot Air Oven & Balance (Equipment used in the Laboratory that measured the moisture content)
Monitoring parameter	Moisture content of bagasse used in the project activity; "Moisture _{bagasse} "
S/N	Hot Air Oven make Universal – OV/05 Balance Make KEROY - K2554
Type	Not Specified
Level	± 5% (Hot Air Oven) ± 0.3% (Balance)
Calibration frequency requirement	Once in a year
Calibration date	08/01/2009, 05/01/2010 & 01/08/2011 ^{/18/}
Validity	1 Year
Are there delays in calibration?	YES; However it is to be noted that this parameter is not used in the emission reduction calculation.
Calibration Entity	Ampel Calibration Lab
Accreditation Certificate for the calibration entity	ETDC

Monitoring equipment	Level Guage
Monitoring parameter	Quantity of diesel consumed in DG set for electricity generation used by project activity "FC _{i,i,v} (Diesel)"
S/N	Not Applicable
Type	Not Specified
Level	Not Specified
Calibration frequency requirement	Once in a year
Calibration date	05/06/2009, 02/06/2010, 30/05/2011 & 28/05/2012 ^{/19/}
Validity	1 Year
Are there delays in calibration?	No
Calibration Entity	P.S Mohana Rao; Competent Person Authorized by Weighs and Measures Department; Storage Tank; Approval No.769/98
Accreditation Certificate for the calibration entity	Weighs and Measures Department; Storage Tank

Discussion of findings:

The period of operation of the main meters and check meters has not been reported in the MR^{/4.1/}. **Thus CAR#1 was raised.** In response the PP incorporated the period of operation of the main meters and check meters in section B.1 of the MR^{/5/}. The period of operation of the meters indicated in section B.1 of the MR^{/5/} found to be appropriate as the same has been checked and confirmed from the plant log book records^{/16/}. **Thus CAR#1 was closed.**

3.6 Summary of compliance with the calibration frequency requirements for measuring instruments.

The calibration of the following measuring equipment has an impact on the claimed emission reductions:

- A. Energy Meters (both main meters and check meters) measuring the parameter Electricity exported to the grid after meeting captive & auxiliary power requirements during the year y ; “ $EG_{\text{export},y}$ ” & Electricity import from grid to the project activity during the year y ; “ $EG_{\text{import},y}$ ”.
- B. Level Gauge measuring the parameter Quantity of diesel consumed in DG set for electricity generation used by project activity “ $FC_{i,j,y}$ (Diesel)”.

As detailed in section 3.6 of this report, calibration of the measuring instruments have been done in line with the frequency defined in the registered monitoring plan and no delay in calibration was observed for the measuring instruments which measured the parameters used in the emission reduction calculation. It is to be noted that there is a delay in calibration of the measuring equipments which measured the parameter “Moisture content of bagasse used in the project activity; “ $Moisture_{\text{bagasse}}$ ” however this parameter is not used in the emission reduction calculation thus no impact in the emission reduction calculation.

3.7 Accuracy of Emission Reduction Calculations

The calculation of the emission reductions is found to be correct. No CARs were raised. The details of the reported and the verified values for all parameters are listed in section 4, ‘Calculation of Emission Reductions’ of this report.

Electricity exported to the grid and electricity imports from the grid by project activity have been taken from the monthly JMR. This is jointly recorded by APTRANSCO officials with GSIL representative. The same was also cross checked with the monthly invoice raised to APTRANSCO. The net electricity supplied to the grid by the project activity is calculated from the parameters Electricity imports from the grid and Electricity exported to the grid.

Baseline emissions are calculated by multiplying the net electricity supplied to the grid with the grid emission factor (fixed ex ante). The project emissions are calculated by multiplying the total tonnes of diesel consumed with the CO_2 emission factor of diesel. It is to be noted that the diesel has been used in the DG set for trial run purpose only (to keep the DG set in better running condition) for the monitoring period under consideration. There is no leakage emissions associated with the project activity.

3.8 Quality of Evidence to Determine Emission Reductions

Critical parameters used for the determination of the Emission Reductions are discussed in section 3.4 above. All the data recorded is in compliance with the monitoring report.

3.9 Management and operational System and Quality Assurance

The companies involved in the project have followed quality assurance system implementation and there is a CDM procedure in place. This was confirmed during the site visit and interviews with plant persons and therefore the assessment team can confirm that the management system the CDM project is in place; with the responsibilities properly identified and in place.

In order to verify data quality, the companies involved in the project, work in accordance with a quality assurance procedure^{/20/} (*Procedure for Monitoring Plan Implementation*), which establishes the operational and management structure implemented.

3.10 Data from External Sources

1. $EF_{\text{grid,OM},y}$; The simple operating margin CO_2 Emission Factor of Southern Grid was fixed during validation as 0.9867 t CO_2 /MWh and this was checked and confirmed from section B.6.2 of the registered PDD version 05 dated 23/11/2010 and the revised PDD^{/1B/}.

2. $EF_{grid,BM,y}$; The build margin CO₂ Emission Factor of Southern Grid was fixed during validation as 0.82 tCO₂/MWh and this was checked and confirmed from section B.6.2 of the registered PDD version 05 dated 23/11/2010 and the revised PDD^{/1B/}.

Based on the $EF_{grid,OM,y}$ & $EF_{grid,BM,y}$ the combined margin emission factor of the grid ($EF_{grid,CM,y}$) has been fixed ex-ante for the entire crediting period. The $EF_{grid,CM,y}$ has been fixed as 0.86167 tCO₂/MWh for the second crediting period and this was checked and confirmed from section B.6.1 of the registered PDD version 05 dated 23/11/2010 and the revised PDD^{/1B/}.

3. NCV_{diesel} ; The net calorific value of diesel has been fixed ex-ante as 43.3 GJ/ton and the same was checked and confirmed from section B.6.2 of the revised PDD^{/1B/}. The value of this parameter has been corrected. Please refer section 3.2.2 of this report and CAR#4 for further details.
4. EF_{diesel} ; The CO₂ emission factor of diesel has been fixed ex-ante as 0.0748 tCO₂/GJ and the same was checked and confirmed from section B.6.2 of the revised PDD. The value of this parameter remains same as 0.0748 tCO₂/GJ, however the only description of this parameter has been corrected in line with tool in the revised PDD. Please refer to section 3.2.2 of this report and CAR#4 for further details.

CAR#4 was raised for the following reasons;

1. The specific date of implementation start was not mentioned in sections A.1 and B.1 of the MR as only the year was mentioned.
2. The tools referred by methodology and applicable for project activity were not mentioned as per the MR completion guidance EB70, Annex11 in section A.4 of MR. Also section B.1 did not mention "description of the installed technology (ies), technical process and equipment as per the MR completion guidance EB70, Annex11.
3. The NCV value of diesel (NCV_{diesel}) which was fixed ex-ante in the registered PDD (approved RCP PDD) was not in line with the tool "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion", Version 2 (EB41 Annex11) and the description of the parameter " $EF_{diesel} / EF_{CO2,i,y}$ " was not in line with the tool EB41 Annex 11. Also the web link of CEA database indicated in section D.1 of the MR was not working.
4. In section D.2 for the parameters " $EG_{export,y}$ " and " $EG_{import,y}$ " in the calibration details of Energy meters the dates had been reported as "calibration validity" dates however as per the calibration certificates provided it is "calibration due date".
5. The ER value of the current monitoring period had been reported in section E.7 of the MR. However as per the template, this section is applicable if the monitoring period starts before 31/12/2012 and goes beyond 01/01/2013.

In response the PP;

1. Indicated the specific date of implementation of the start in section A.1 and B.1 of the final MR.
2. Incorporated the details regarding the tools referred by methodology and applicable for project activity in section A.4 of the final MR. Also section B.1 has been revised appropriately for the description of the installed technology (ies), technical process and equipment as per the MR completion guidance Version 4 dated 04/10/2013.
3. The NCV value of diesel (NCV_{diesel}) has been corrected in line with the tool "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion", Version 2 (EB41 Annex11) in the revised PDD^{/1B/} and the ER sheet version 4 dated 04/09/2013^{/1B/} which are being submitted along with this submission request. Also the description of the parameter " $EF_{diesel} / EF_{CO2,i,y}$ " has been revised in the final PDD in line with the tool EB41 Annex 11. The weblinks of the CEA database indicated in section D.1 of the final MR have been corrected. Please refer to section 3.2.2 of this report and CAR#4 in the Findings Overview for further details.

4. The PP revised section D.2 of the final MR^{5/} for the parameters “EG_{export,y}” and “EG_{import,y}” in the calibration details of Energy meters the dates as “calibration due date” which is appropriate.
5. The PP revised section E.7 of the final MR appropriately as “Not Applicable” as the current monitoring period end date is 24/06/2012.

Thus CAR#4 was closed.

4. Calculation of Emission Reductions

Parameter	Reported Value (Webhosted MR Version 01 dated 06/10/2012)	Verified Value(Final MR Version 12 dated 14/11/2013)
Net electricity supplied to the grid by the project activity "EG _{BL,y} "	84449 MWh	84449 MWh
Electricity exported to the grid after meeting captive & auxiliary power requirements during the year y, "EG _{export,y} "	86137 MWh	86137 MWh
Electricity import from grid to the project activity during the year y, "EG _{import,y} "	1688 MWh	1688 MWh
Quantity of bagasse used in the project activity, "B _{Biomass,y} "	230899 Tons	230899 Tons
Net calorific value of bagasse used in the project activity "NCV _{bagasse} "	7.6 GJ/ton	7.566 GJ/ton* * The measured value of this parameter has been adjusted conservatively as there is a delay in calibration of the measuring instruments. Also it is to be noted that this parameter is not used in emission reduction calculation however only used for cross checking.
Moisture content of bagasse used in the project activity, "Moisture _{bagasse} "	49.75%	49.95%* * The measured value of this parameter has been adjusted conservatively as there is a delay in calibration of the measuring instruments. Also it is to be noted that this parameter is not used in emission reduction calculation however only used for cross checking.
Quantity of diesel consumed in DG set for electricity generation used by project activity, "FC _{i,j,y} (Diesel)"	2980 Litres	2980 Litres

Based on the verified values, the emission reductions is as follows

$$BE_y = EG_{BL,y} * EF_{CO2,grid,y}$$

Where

BE_y Baseline emissions in year y; t CO₂.

EG_{BL,y} Energy baseline in year y; kWh.

EG_{BL,y} = (Electricity exported to the grid after meeting captive & auxiliary power requirements) – (Electricity Import from the grid).

$EF_{CO_2, grid, y}$ Emission factor in year y; t CO₂e/kWh.

$$BE_y = 84,449 \text{ MWh} \times 0.86167 \text{ tCO}_2\text{e/MWh} = 72767 \text{ tCO}_2\text{e}$$

$$PE_y = FC_{diesel} \times COEF_{diesel}$$

Where :

PE_y Are the CO₂ emissions from diesel consumption during the year y (tCO₂/yr);

FC_{diesel} Is the quantity of diesel consumed in process during the year y (tons/yr), which equals to the Quantity of diesel consumed in litres/yr times the density of diesel (ρ_{diesel}) in kg/lit and divide by 1000 kg/ton to convert the unit of FC_{diesel} to tons/yr.

$COEF_{diesel}$ Is the CO₂ emission coefficient of diesel in year y (tCO₂/ton). $COEF_{diesel}$ is based on Option B of "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion".
 $COEF_{diesel} = NCV_{diesel} \times EF_{CO_2, diesel}$

Therefore

$$PE_y = FC_{diesel} \times NCV_{diesel} \times EF_{CO_2, diesel}$$

Where:

FC_{diesel} Is the quantity of diesel consumed in process during the year y (tons/yr),

NCV_{diesel} Is net calorific value of the diesel (GJ/ton)

$EF_{CO_2, diesel}$ Is the CO₂ emission factor of diesel in year y (tCO₂/GJ)

$$PE_y = 2.47 \text{ ton} \times 43.3 \text{ GJ/ton} \times 0.0748 \text{ tCO}_2\text{/GJ} = 8\text{tCO}_2$$

It is to be noted that the total quantity of diesel consumed in DG set for electricity generation as well as trail run purpose for the monitoring period under consideration is 2980 Litres. To convert the litres of diesel consumption to kg's the density value of 0.83 kg/litre has been considered for diesel as per Central Electricity Authority's (CEA) "CO₂ Baseline Database" Version 5, November 2009 which found to be appropriate.

$$\begin{aligned} \text{Therefore, } ER_y &= BE_y - PE_y \\ &= 72767 \text{ tCO}_2\text{e} - 8\text{tCO}_2\text{e} \\ &= 72759 \text{ tCO}_2\text{e} \end{aligned}$$

Emission Reduction:

Period	Reported Value (as per the web hosted MR) tCO ₂ e	Verified Value tCO ₂ e	If Different, Summary of Issues That Caused the Difference
01/01/2010 to 24/06/2012	72,759	72,759	Not applicable

5. Recommendations for Changes in the Monitoring Plan

No recommendations were made as the monitoring plan was appropriate.

6. Overview of Results

Assessment Against the Provisions of Decision 17/CP.7:

Is the project documentation in accordance with the requirements of the registered PDD and relevant provision of decision 17/CP.7, EB decisions and guidance and the COP/MOP?

Yes. The results of the compliance assessment are recorded in the verification checklist which is used as an internal report only.

Have on-site inspections been performed that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observations of established practices and testing of the accuracy of monitoring equipment?

Yes. The assessment team (members of the team at the time of site visit), visited the site and undertook interviews, collected data, audited the implementation of procedures, checked calibration certificates and checked data, inter alia.

The results of the site visit are recorded in the verification checklist which is used as an internal report only.

The evidences have been checked and collected. The final monitoring report is attached with this verification report.

Has data from additional sources been used? If yes, please detail the source and significance.

Yes, additional data has been used from external source and significance explained in section 3.10 of this report.

Please review the monitoring results and verify that the monitoring methodologies for the estimation of reductions in anthropogenic emissions by sources have been applied correctly and their documentation is complete and transparent.

Yes. The monitoring methodology has been correctly applied and the monitoring report and supporting references are complete and transparent.

Have any recommendations for changes to the monitoring methodology for any future crediting period been issued to the project participant?

No.

Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM project activity, based on the data and information using calculation procedures consistent with those contained in the registered project design document and the monitoring plan.

The data used in anthropogenic emission reduction calculation is consistent with those contained in the registered PDD and monitoring plan. The emission reduction was 116,613 tCO₂ for the period 01/01/2010 to 24/06/2012 as per the estimation made in the registered PDD. The actual emission reduction has been verified as 72,759 tCO₂ for the same period and this difference is discussed in section 3.1 of this verification report

Identify and inform the project participants of any concerns related to the conformity of the actual project activity and its operation with the registered project design document. Project participants shall address the concerns and supply relevant additional information.

"No such non conformity of the actual project activity and its operation with the registered project design document has been observed."

Post monitoring report on the UNFCCC website

Yes, the monitoring report is available at ref. 0370 on the UNFCCC website

<http://cdm.unfccc.int/Projects/DB/SGS-UKL1146080365.67/view>

7. Verification and Certification Statement

SGS United Kingdom Ltd has been contracted by Ganpati Sugar Industries Limited to perform the verification of the emission reductions reported for the CDM project "Ganpati co-generation project at Medak, Andhra Pradesh" and UNFCCC Reference Number 0370 in the period 01/01/2010 to 24/06/2012.

The verification is based on the validated and registered project design document and the monitoring report for this project. Verification is performed in accordance with section I of Decision 3/CMP.1, and relevant decisions of the CDM EB and CoP/MoP. The scope of this engagement covers the verification and certification of greenhouse gas emission reductions generated by the above project during the above mentioned period, as reported in Monitoring Report Version 12 dated 14/11/2013.

The management of Ganpati Sugar Industries Limited is responsible for the preparation, calculation and determination of GHG emission reductions from the project. The development and maintenance of records and reporting procedures are in accordance with the monitoring report.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01/01/2010 to 24/06/2012 based on the reported emission reductions in the Monitoring Report Version 12 dated 14/11/2013 for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, SGS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

SGS confirms that the project is implemented as described in the validated and registered project design documents. Based on the information we have seen and evaluated, we confirm the following:

Project Title:	Ganpati co-generation project at Medak, Andhra Pradesh
UNFCCC Reference Number:	0370
Registered PDD and Revised PDD Used for Verification:	PDD Version 5 dated 23/11/2010 and Revised PDD Version 8 dated 14/11/2013 (being submitted along with this RFI)
Methodology Used for Verification:	AMS.I.C, Version 17 dated 28/05/2010
Applicable Period:	01/01/2010 to 24/06/2012
Total GHG Emission Reductions Verified:	72,759 tCO _{2e}

Signed on behalf of the Verification Body by Authorized Signatory



Signature:

Name: Siddharth Yadav

Date: 16/12/2013

8. Document References

1. Registered PDD (renewable of crediting period i.e second crediting period) version 05 dated 23/11/2010 & Appendix 1-Emission Reduction Calculation sheet
<http://cdm.unfccc.int/Projects/DB/SGS-UKL1146080365.67/view>
- 1.1 PDD Version 5 dated 23/11/2010 in VVS template.
- 1.A Revised PDD version 6 dated 12/07/2013 and ER sheet Version 4 dated 04/09/2013 , Revised PDD Version 7 dated 04/09/2013 (intermediate).
- 1.B Revised PDD Version 8 dated 14/11/2013 (Final) and Revised ER sheet Version 5 dated 12/11/2013 for the estimation of emission reductions applicable for second crediting period(Final)
2. Approved Small Scale Methodology AMS I.C Version 17 dated 28/05/2010
3. First Crediting Period Design Documents and Verifications Reports
<http://cdm.unfccc.int/Projects/DB/SGS-UKL1146080365.67/view?cp=1>
4. /4.1/ Monitoring Report, Version 1 dated 06/10/2012 (Webhosted) and ER sheet Version 1 dated 06/10/2012 (Initial)
 /4.1.1/ Monitoring Report, Version 2 dated 16/11/2012 (intermediate) and ER sheet Version 2 dated 16/11/2012 (intermediate)
 /4.1.2/ Monitoring Report, Version 3 dated 22/12/2012 (intermediate) and ER sheet Version 3 dated 22/12/2012 (intermediate)
 /4.1.3/ Monitoring Report, Version 4 dated 28/01/2013 (intermediate) and ER sheet Version 4 dated 28/01/2013 (intermediate)
 /4.1.4/ Monitoring Report, Version 5 dated 26/02/2013 (intermediate) and ER sheet Version 5 dated 26/02/2013 (intermediate)
 /4.1.5/ Monitoring Report, Version 6 dated 03/05/2013 (intermediate) and ER sheet Version 6 dated 03/05/2013 (intermediate)
 /4.1.6/ Monitoring Report, Version 7 dated 12/07/2013 (intermediate) and ER sheet Version 7 dated 12/07/2013 (intermediate)
 /4.1.7/ Monitoring Report, Version 8 dated 04/09/2013 (intermediate) and ER sheet Version 8 dated 04/09/2013 (intermediate)
 /4.1.8/ Monitoring Report, Version 9 dated 25/09/2013 (intermediate) and ER sheet Version 9 dated 25/09/2013 (intermediate).
 /4.1.9/ Monitoring Report, Version 10 dated 14/10/2013 and ER sheet Version 10 dated 14/10/2013
 /4.1.10/ Monitoring Report, Version 11 dated 12/11/2013 (intermediate)
5. Monitoring Report, Version 12 dated 14/11/2013 (Final)
6. ER sheet Version 11 dated 12/11/2013 (Final)
7. Power Purchase Agreement dated 30/04/2002 between APTRANSCO and Ganpati Sugar Industries Ltd
8. Commissioning Letter dated 15/01/2003 provided by APTRANSCO.

9. APCB renewal of consent to operate Order No.APPCB/PTN/PTN/170/CFO/HO/2011 dated 21/03/2011 validity up to 31/10/2013.
- 9.1 Turbogenerator supply contract between Ganpati Sugar Industries Limited and Bharat Heavy Electricals Limited dated 29/04/2001.
10. /10.1/ Plant Records for Cane Crushing, Bagasse generation, bagasse consumption during this monitoring period.
/10.2/ RT 8 C for number of operating days, cane crushed and bagasse generated during this monitoring period.
11. Monthly JMR and Monthly invoice to APTRANSCO from 01/01/2010 to 24/06/2012 i.e. for the whole monitoring period.

12. Calibration details of Energy Meters:

/12.1/ Main Meter Calibrations:

/12.1.1/Calibration certificate for the meter 01959480 having ref.no ETDC(Hy)/Cal-1844/09-10 from ETDC indicating calibration date as 11/08/2009 and validity upto 10/08/2010

/12.1.2/ Calibration certificate for the meter 01959478 having ref.no ETDC(Hy)/Cal-1654/10-11 from ETDC indicating calibration date as 26/07/2010 and validity upto 25/07/2011

/12.1.3/Calibration certificate for the meter 01959480 having ref.no ETDC(Hy)/Cal-1735/11-12 from ETDC indicating calibration date as 04/07/2011 and validity upto 03/07/2012

/12.2/ Check Meter:

/12.2.1/ Calibration certificate for the meter 03148278 having ref.no ETDC(Hy)/Cal-1843/09-10 from ETDC indicating calibration date as 11/08/2009 and validity upto 10/08/2010

/12.2.2/ Calibration certificate for the meter 01999438 having ref.no ETDC(Hy)/Cal-1653/10-11 from ETDC indicating calibration date as 26/07/2010 and validity upto 25/07/2011

/12.2.3/ Calibration certificate for the meter 03148278 having ref.no ETDC(Hy)/Cal-1736/11-12 from ETDC indicating calibration date as 04/07/2011 and validity upto 03/07/2012

13. NCV of Bagasse Test Reports;

/13.1/ Bagasse calorific value test report dated 11/01/2010 from ESVEE Enviro systems,Hyderabad indicating the GCV value as 2265.3 Kcal/Kg, Pol% Bagasse as 2.11 and Moisture % Bagasse as 50.20 for the year 2009-2010.

/13.2/ Bagasse calorific value test report dated 19/01/2011 from ESVEE Enviro systems,Hyderabad indicating the GCV value as 2287.6 Kcal/Kg, NCV as 1813.1 Kcal/Kg Pol% Bagasse as 1.80 and Moisture % Bagasse as 49.80 for the year 2010-2011.

/13.3/ Bagasse calorific value test report dated 04/01/2012 from ESVEE Enviro systems,Hyderabad indicating the GCV value as 2292 Kcal/Kg, NCV as 1818 Kcal/Kg Pol% Bagasse as 1.80 and Moisture % Bagasse as 49.70 for the year 2011-2012.

14. Bagasse Moisture Test reports by ESVEE Enviro systems, Hyderabad for the season months Jan 2010 (report dated 11/01/2010), Feb 2010 (report dated 13/02/2010), Mar 2010 (report dated 04/03/2010), Dec 2010 (report dated 10/12/2010), Jan 2011 (report dated 19/01/2011), Feb 2011 (report dated 12/02/2011), Mar (report dated 06/03/2011), Apr (report dated 05/04/2011), May 2011 (report dated 04/05/2011), Nov 2011 (report

dated 20/11/2011), Dec 2011 (report dated 13/12/2011), Jan 2012 (report dated 04/01/2012), Feb 2012 (report dated 02/02/2012), Mar 2012 (report dated 10/03/2012), Apr 2012 (report dated 07/04/2012) and May 2012 (report dated 15/05/2012).

15. /15.1/ Plant log book for diesel consumption in the DG set for the period 01/01/2010 to 24/06/2012
/15.2/ Plant log book for Power generation from DG set for the period 01/01/2010 to 24/06/2012
/15.3/ Diesel Issue Silps provided by DG set department for the period 01/01/2010 to 24/06/2012
16. Plant log book records for main meter and check meter replacement dates for the monitoring period 01/01/2010 to 24/06/2012
17. Calibration details of Bombcalorimeter

/17.1/ Calibration certificate for the bombcalorimeter of ESVEE Envirosystems by S.M Enterprises having ref no. SME/SUJ/EES/BC/CAL-1/1 2009 dated 01/11/2009 indicating the calibration date as 01/11/2009 and validity upto 31/10/2010.

/17.2/ Calibration certificate for the bombcalorimeter of ESVEE Envirosystems by S.M Enterprises having ref no. SME/SUJ/EES/BC/CAL-1/2 2010 dated 28/10/2010 indicating the calibration date as 28/10/2010 and validity upto 27/10/2011.

/17.3/ Calibration certificate for the bombcalorimeter of ESVEE Envirosystems by S.M Enterprises having ref no. SME/SUJ/EES/BC/CAL-1/3 2011 dated 25/10/2011 indicating the calibration date as 25/10/2011 and validity upto 24/10/2012.
18. Calibration details of Hot air oven and balance

/18.1/ Calibration certificate for the Balance and Hot Air Oven of ESVEE Envirosystems by Ampel Calibration Lab having ref nos.2K9 626, 2K9 627 dated 08/01/2009 indicating the calibration date as 08/01/2009 and validity upto 07/01/2010.

/18.2/ Calibration certificate for the Balance and Hot Air Oven of ESVEE Envirosystems by Ampel Calibration Lab having ref nos.10010578, 10010577 dated 08/01/2009 indicating the calibration date as 05/01/2010 and validity upto 04/01/2011.

/18.3/ Calibration certificate for the Balance and Hot Air Oven of ESVEE Envirosystems by Ampel Calibration Lab having ref nos.11080184,11080182 dated 01/08/2011 indicating the calibration date as 01/08/2011 and validity upto 31/07/2012.
19. Calibration details fo Level Gauge

/19.1/ Calibration certificate for the level gauge by P.S Mohana Rao (Competent Person Authorized by Weighs and Measures Department; Storage Tank; Approval No.769/98) dated 05/06/2009 indicating the calibration date as 05/06/2009 and validity upto 04/06/2010.

/19.2/ Calibration certificate for the level gauges by P.S Mohana Rao (Competent Person Authorized by Weighs and Measures Department; Storage Tank; Approval No.769/98)dated 02/06/2010 indicating the calibration date as 02/06/2010 and validity upto 01/06/2011.

/19.3/ Calibration certificate for the level gauges by P.S Mohana Rao (Competent Person Authorized by Weighs and Measures Department; Storage Tank; Approval No.769/98)dated 30/05/2011 indicating the calibration date as 30/05/2011 and validity upto 01/06/2011.

upto 29/05/2012.

/19.4/ Calibration certificate for the level gauges by P.S Mohana Rao (Competent Person Authorized by Weights and Measures Department; Storage Tank; Approval No.769/98)dated 28/05/2012 indicating the calibration date as 28/05/2012 and validity upto 27/05/2013.

20. Internal Audit Reports dated 02/02/2011, 20/01/2012 and 20/08/2012.
21. Clean Development Mechanism Validation and Verification Standard version 05.0 dated 04/10/2013
22. MONITORING REPORT FORM (F-CDM-MR) version 03.2 dated 05/11/2013
23. Clean Development Mechanism Project Standard version 5 dated 04/10/2013

Major Changes: Webhosted MR Vs Final MR

MR Version	Date of Revision	Main changes reason for Revision
12	14/11/2013	<p>The period of operation of main meter and check meter have been reported in section B.1 of the MR. Refer CAR#1 in the findings overview.</p> <p>Calibration details of the equipments measuring the parameters NCV_{bagasse} and Moisture_{bagasse} have been reported in section D.2 of the MR. Refer CAR#3 in the findings overview.</p>

9. Findings Overview

Findings Overview Summary

	CARs	CLs	FARs
Total Number raised	3	1	-

Date:	01/11/2012		Raised by:	Assessment Team		
Type:	CAR	Number:	1	Reference:	AU4	
Lead Assessor Comment:				Date: 01/11/2012		
The period of operation of the main meters and check meters has not been reported in the MR Version 1 dated 06/10/2012. The PP is requested to report the same in the MR.						
Project Participant Response:				Date: 16/11/2012		
The period of operation of Main & check meters is now explained in revised MR section B.1.						
Documentation Provided as Evidence by Project Participant:						
GSIL MR V2-MP1 of CP2.doc						
Information Verified by Lead Assessor:						
Revised MR Version 2 dated 16/11/2012						
Reasoning for not Acceptance or Acceptance and Close Out:						
The PP has incorporated the period of operation of the main meters and check meters in section B.1 of the revised MR Version 2 dated 16/11/2012. CAR is Closed.						
Acceptance and Close out by Lead Assessor: Closed				Date: 12/12/2012		

Date:	01/11/2012	Raised by:	Assessment Team		
Type:	CL	Number:	2	Reference:	AU4
Lead Assessor Comment:			Date: 01/11/2012		
In section D.2 of the MR version 1 dated 06/10/2012 it has been reported that the QA/QC procedures are not applicable for the parameters $EG_{BL,y}$ and $B_{Biomass,y}$ however as per the registered (RCP) PDD Version 5 dated 23/11/2010 the QA/QC procedures have been defined for these parameters. The PP shall clarify.					
Project Participant Response:			Date: 16/11/2012		
As explained in the registered PDD section B.7.1, $EG_{BL,y}$ is a calculated value and not a measured value where it requires QA/QC procedures, i.e., $EG_{BL,y} = (EG_{export,y} - EG_{import,y})$. QA/QC procedures defined in PDD for $EG_{BL,y}$ is actually applicable to $EG_{export,y}$ & $EG_{import,y}$, as the value is calculated based on measured data like $EG_{export,y}$ & $EG_{import,y}$, meters measuring the data $EG_{export,y}$ & $EG_{import,y}$ are with best accuracy and are calibrated with a minimum frequency of once a year. Hence in MR it was reported that the QA/QC procedures are not applicable for the parameters $EG_{BL,y}$					
As explained in the registered PDD section B.7.1, $B_{Biomass,y}$ is an estimated data and not a measured value where it requires QA/QC procedures, it is estimated based on cane crushed, steam generation, bagasse production, open stock bagasse and closed stock bagasse etc. Hence in MR it was reported that the QA/QC procedures are not applicable for the parameters $B_{Biomass,y}$. This data is also not used for calculating the emission reductions.					
Documentation Provided as Evidence by Project Participant:					
GSIL MR V2-MP1 of CP2.doc					
Information Verified by Lead Assessor:					
Revised MR Version 2 dated 16/11/2012					
Reasoning for not Acceptance or Acceptance and Close Out:					
As $EG_{BL,y}$ has been calculated from the parameters $EG_{export,y}$ & $EG_{import,y}$ and QA/QC procedure as defined in the RCP PDD has been followed for the parameters $EG_{export,y}$ & $EG_{import,y}$ thus the same has been accepted. As per the methodology the parameter $B_{Biomass,y}$ has to be measured continuously (using mass or volume based measurements and adjusted for moisture content) And/or estimated using annual mass/energy balance. The registered RCP PDD clearly indicates that this parameter is estimated based on cane crushed, steam generation, bagasse production and open, closing stock of bagasse thus the QA/QC procedure indicated in the registered RCP PDD is not applicable. Closed.					
Acceptance and Close out by Lead Assessor: Closed			Date: 12/12/2012		

Date:	01/11/2012	Raised by:	Assessment Team		
Type:	CAR	Number:	3	Reference:	AU4
Lead Assessor Comment:		Date: 01/11/2012			
<p>The PP is requested to demonstrate that the independent laboratory which determined the parameters NCV_{bagasse} and Moisture_{bagasse} complied with the national quality standards as defined in the registered (RCP) PDD.</p> <p>The measuring frequency of the parameter Moisture_{bagasse} is monthly as per the registered (RCP) PDD however only annual values have been reported in the MR Version 1 dated. The PP shall clarify whether monthly measurement was done for this parameter. Also calibration details of equipment measured this parameter have not been reported in the MR Version 1 dated 06/10/2012. The PP shall clarify.</p>					
Project Participant Response:		Date: 16/11/2012			
<p>Esvee Labs is the laboratory where NCV_{bagasse} and Moisture_{bagasse} test is conducted. Calibration details of equipment measured of the same are attached supporting the compliance of national quality standards as defined in registered PDD.</p> <p>Moisture_{bagasse} is measured on Monthly basis in every season and the weighted average value of all months covering the monitoring period is finally reported in MR. Moisture_{bagasse} is measured by an independent laboratory by conducting laboratory test on monthly basis. Calibration details of equipment measured of the same are attached.</p>					
Documentation Provided as Evidence by Project Participant:					
GSIL MR V2-MP1 of CP2.doc					
Information Verified by Lead Assessor:					
<p>Revised MR Version 2 dated 16/11/2012.</p> <p>Revised ER sheet Version 2 dated 16/11/2012.</p> <p>Calibration certificates for the calibration of measuring instruments used for the parameter NCV_{bagasse} for the calibration done on 08/01/2009, 05/01/2010 and 01/08/2011.</p> <p>Calibration certificates for the calibration of measuring instruments used for the parameter Moisture_{bagasse} for the calibration done on 08/01/2009, 05/01/2010 and 01/08/2011.</p> <p>Bagasse NCV analysis report from ESVEE Labs, Hyderabad for the analysis done on 11/01/2010 for the year 2009-2010.</p> <p>Bagasse NCV analysis report from ESVEE Enviro Systems, Hyderabad for the analysis done on 19/01/2011 for the year 2010-2011.</p> <p>Bagasse NCV analysis report from ESVEE Enviro Systems, Hyderabad for the analysis done on 04/01/2012 for the year 2011-2012.</p> <p>Note: All the above listed documents were submitted to the team by the PP though they have not listed the same in the above section.</p>					
Reasoning for not Acceptance or Acceptance and Close Out:					
<ol style="list-style-type: none"> 1. The PP submitted the calibration certificates for the calibration of measuring instruments used for the parameters NCV_{bagasse} and Moisture_{bagasse} with master calibration details, validity etc. However the PP is requested to clarify why the NCV_{bagasse} measured in 2010 i.e for the season 2009-2010 has not been reported in the MR as the monitoring period starts from 01/01/2010. Also the NCV analysis of the bagasse was done on 11/01/2010, 19/01/2011 and 04/01/2012 for the years 2009-2010, 2010-2011 and 2011-2012 respectively as per the lab test reports. However as checked from the calibration certificates for the calibration of measuring instrument used for the parameter NCV_{bagasse} for the calibrations were done on 08/01/2009, 05/01/2010 and 01/08/2011. The validity of calibration was expired on 04/01/2011 however the NCV measurement was done on 19/01/2011 for the year 2010-2011, there is a delay in calibration for the measuring instrument. Thus the PP is requested clarify how the NCV value reported for the year 2010-2011 is appropriate. Open. 2. The weighted average value for the entire monitoring period has been reported in section D.2 of the revised MR version 2 dated 16/11/2012 for the parameter Moisture_{bagasse}. However PP is requested to indicate the values as per the recording frequency indicated in the RCP PDD or to refer the ER sheet. In the same way the PP is requested to report all the parameters in the MR or refer ER sheet. Also the PP is requested to substantiate with the documentary evidence the maximum permissible error % considered for the adjustment of this parameter for the delay in calibration period. Open. 					

3. The PP is requested to use the latest version of the applicable MR template (F-CDM-MR). Open. CAR is open.	
Acceptance and Close out by Lead Assessor: Open	Date: 12/12/2012
Project Participant Response:	Date: 22/12/2012
<ol style="list-style-type: none"> 1. NCV value Adjusted in line with the EB52 Annex 60 requirements, same is reported in MR and CER sheet 2. It is now indicated in the MR section D.2 for Moisture_{bagasse} that the value is as per the registered RCP PDD. Evidence for permissible error i.e., calibration certificates has been provided to DOE (Maximum permissible error assumed by PP). 3. Approved latest version of MR is available in UNFCCC website, but not able to access/open the complete document. 	
Documentation Provided as Evidence by Project Participant:	
<i>GSIL MR V3-MP1 of CP2.doc</i> <i>CERs MP1 of CP2 v3.xls</i>	
Information Verified by Lead Assessor:	
Revised MR Version 3 dated 22/12/2012 Revised ER sheet Version 3 dated 22/12/2012	
Reasoning for not Acceptance or Acceptance and Close Out:	
<ol style="list-style-type: none"> 1. The PP has reported the calorific value for the season 2009-2010 in the MR Version 3 dated 22/12/2012 however PP is requested to clarify whether the NCV_{bagasse} reported is NCV or GCV as the same is not clear from the test report. Also the PP is requested to substantiate with the documentary evidence the maximum permissible error % considered for the adjustment of this parameter for the delay in calibration period in line with EB52, Annex 60. Open. 2. The maximum permissible error % considered for the adjustment of the parameter Moisture_{bagasse} for the delay in calibration period has been confirmed from the calibration certificates. OK. However PP was requested to report all the values as per the recording frequency indicated in the RCP PDD or to refer the ER sheet in the section D.2 of MR. Open. 3. The PP is requested to use the latest version of the applicable MR template (F-CDM-MR). Open. 	
CAR is open.	
Acceptance and Close out by Lead Assessor: Open	Date: 10/01/2013
Project Participant Response:	Date: 28/01/2013
Reported calorific value in MR Version 3 for the season 2009-2010 is the GCV, taking into account the NCV is 79.25% of GCV as observed for the season 2010-2011 and 2011-2012, the NCV _{bagasse} for the season 2009-2010 is considered to be 1795.25Kcal/kg. However from subsequent season PP is carrying out NCV also to meet the verification requirements. It is observed from the Calibration certificates that the tests done at 95% confidence level as 3% uncertainty, However PP on conservative basis applied 5% as maximum permissible error for the adjustment to be in line with EB52, Annex 60	
All the values indicated as per RCP PDD	
MR in VVS template is provided to DOE	
Documentation Provided as Evidence by Project Participant:	
<i>GSIL MR V4-MP1 of CP2.doc</i>	
Information Verified by Lead Assessor:	
MR version 4 dated 28/01/2013 ER sheet version 4 dated 28/01/2013	
Reasoning for not Acceptance or Acceptance and Close Out:	
<ol style="list-style-type: none"> 1. The PP has considered NCV for the season 2009-2010 based on the GCV to NCV ratio of the seasons 2010-2011 and 2011-2012, PP shall clarify how this is appropriate. Also the PP was requested to substantiate with the documentary evidence the maximum permissible error % considered for the adjustment of this parameter for the delay in calibration period in line with EB52, Annex 60. Also PP is requested to provide the calibration details of the equipment used for the measuring the NCV of bagasse. Open. 2. For the monitoring parameters such as diesel consumption, quantity of bagasse etc the values have not been reported as per the recording frequency indicated in the RCP PDD in the ER sheet. PP shall 	

clarify. Open.	
3. The PP has revised the MR in new template. Closed.	
CAR is open.	
Acceptance and Close out by Lead Assessor: Open	Date: 11/02/2013
Project Participant Response:	Date: 26/02/2013
<p>The approach used for calculating the NCV for the 2010-2011 and 2011-2012 by the laboratory is now provided to DOE, same procedure is applied to the season 2009-2010. Value is reported in revised MR and as well in CER sheet. Calibration certificates of equipment used for measuring the NCV of bagasse and evidence for maximum permissible error are now provided to DOE</p> <p>Diesel consumption records are now reported to DOE. Bagasse consumption recording frequency is yearly as per registered RCP which is an estimated value, Yearly estimated bagasse consumption records already been provided to DOE during the first response by file name "Bagasse Consumption.pdf"</p>	
Documentation Provided as Evidence by Project Participant:	
<p><i>CERs MP1 of CP2 v5.xls</i> <i>GSIL MR V5-MP1 of CP2.doc</i> <i>Bagasse GCV-NCV.doc</i> <i>bomb cal 2010-11, 2009-2010, 2011-2012.pdf</i> <i>Sample Log Sheet for Diesel.pdf</i></p>	
Information Verified by Lead Assessor:	
<p>MR version 5 dated 26/02/2013 ER sheet version 5 dated 26/02/2013 Calibration Certificate of Bomb Calorimeter for the calibration done on 01/11/2009 indicating validity up to 31/10/2010 Calibration Certificate of Bomb Calorimeter for the calibration done on 28/10/2010 indicating validity up to 27/10/2011 Calibration Certificate of Bomb Calorimeter for the calibration done on 25/10/2011 indicating validity up to 24/10/2012</p>	
Reasoning for not Acceptance or Acceptance and Close Out:	
<p>1. The PP has calculated the NCV for the season 2009-2010 based on the formula "NCV = 4250-12S-48.5W" as defined in the HAND BOOK OF CANE SUGAR ENGINEERING By " E . HUGOT" , Page No. 922. As per the bagasse test report for the year 2009-2010, S (Pol % Bagasse) is 2.11 and W (Moisture % Bagasse) is 50.20. Thus the NCV is 1790 Kcal/Kg and the same has been reported in the MR now which found to be appropriate. OK. However as checked from the calibration certificates of the bomb calorimeter there is no delay in calibration observed for the bomb calorimeter thus PP shall clarify why the NCV values have been adjusted. Please note that this issue was incorrectly raised earlier i.e on 12/12/2012 considering the calibration of instrument used for measuring the parameter Moisture_{bagasse} for the parameter NCV_{bagasse} also. Thus please correct. Open</p> <p>2. The bagasse consumption records, diesel consumption records have been already provided and checked during site visit however the PP was requested to report the values of monitoring parameters such as diesel consumption, quantity of bagasse etc as per the recording frequency indicated in the RCP PDD in the MR/ER sheet. Please report the monitored values for all the parameters as per the recording frequency indicated in RCP PDD in the MR/ER sheet. Open.</p>	
CAR is open.	
Acceptance and Close out by Lead Assessor: Open	Date: 07/03/2013
Project Participant Response:	Date: 03/05/2013
<p>As there is no delay in calibration for testing NCV value, the same is reported in revised MR. Yearly values of bagasse consumption and daily values of diesel consumption have been reported in ER sheet. Revised MR is attached.</p>	
Documentation Provided as Evidence by Project Participant:	
<p><i>CERs MP1 of CP2 v6.doc</i> <i>diesel consumption.xls</i></p>	
Information Verified by Lead Assessor:	
<p>MR version 6 dated 03/05/2013 ER sheet version 6 dated 03/05/2013</p>	

Reasoning for not Acceptance or Acceptance and Close Out:	
<ol style="list-style-type: none"> 1. There is no delay in calibration of the instruments measured the NCV of bagasse thus NCV values reported in the MR Version 6 dated 03/05/2013 found to be appropriate. Closed. 2. The parameters diesel consumption, quantity of bagasse etc have been reported as per the recording frequency indicated in the RCP PDD in the MR Version 6 dated 03/05/2013 and ER sheet version 6 dated 03/05/2013. It is to be noted that the PP considered the total diesel purchased during the monitoring period under consideration which is higher than the total diesel utilized in the DG set during the monitoring period under consideration which found to be conservative as the project emission is higher. Closed 	
CAR is closed.	
Acceptance and Close out by Lead Assessor: Closed	Date: 10/05/2013
Lead Assessor Comment:	Date: 20/06/2013 (TR Stage)
<ol style="list-style-type: none"> 1. Details regarding accuracy class, serial number are not reported for the bomb calorimeter and Moisture testing equipments in section D.2 of the MR. Please clarify. 2. The complete daily diesel consumption values have not been reported in the ER sheet for example for the days 26, 27, 29, 30 in Jan 2010 is not mentioned in excel sheet for diesel consumption. Also the diesel consumption data up to 26/05/2012 has been reported in the ER sheet, however monitoring period is up to 24/06/2012. Please clarify it. Also in table of summary of diesel consumed, the Diesel consumption data is not linked with daily data and also few months are repetitive, please clarify it. It is not clear if the opening stock is mentioned or actual diesel consumption is mentioned in excel sheet. Why all months are not mentioned in that summary table. For diesel consumption, why separate durations 01/01/2010 to 28/05/2011 and 19/11/2011 to 27/05/2012 are mentioned in excel sheet. The PP is requested to provide appropriate information/explanation in the ER sheet for clarity. 	
CAR is reopened.	
Project Participant Response:	Date: 12/07/2013
Details of bomb calorimeter and moisture testing equipment have now been mentioned in revised MR. Detailed diesel consumption excel sheet maintaining consistency on data entry is now provided to DOE.	
Documentation Provided as Evidence by Project Participant:	
<i>diesel consumption.xls</i> <i>CERs MP1 of CP2 v7.doc</i>	
Information Verified by Lead Assessor:	
Revised MR version 7 dated 12/07/2013 ER sheet version 7 dated 12/07/2013	
Reasoning for not Acceptance or Acceptance and Close Out:	
<ol style="list-style-type: none"> 1. The details regarding accuracy class serial number are now reported for the bomb calorimeter and Moisture testing equipments in section D.2 of the revised MR. Closed. 2. The complete daily diesel consumption values have not been reported still in the ER sheet for e.g April 2010 to October 2010, June 2011 to October 2011. Please clarify. 	
CAR is open.	
Acceptance and Close out by Lead Assessor: Open	Date: 16/08/2013
Project Participant Response:	Date: 04/09/2013
Daily diesel consumption data for the said months is now clearly reported in ER sheet where as earlier a combined value has been reported for the whole month. However to avoid uncertainty detailed daily sheet is submitted to DOE.	
Documentation Provided as Evidence by Project Participant:	
<i>diesel consumption.xls</i>	
Information Verified by Lead Assessor:	
Diesel Consumption sheet.	
Reasoning for not Acceptance or Acceptance and Close Out:	
The complete daily diesel consumption values have not been reported still in Diesel consumption sheet for the entire months April 2010 and April 2012. Please clarify. Also the PP is requested to incorporate the diesel consumption sheet in the ER sheet itself. CAR is open.	

Acceptance and Close out by Lead Assessor: Open	Date: 23/09/2013
Project Participant Response:	Date : 25/09/2013
Complete daily diesel consumption values for the April 2010 and April 2012 have now been reported in Diesel consumption sheet. Diesel consumption sheet is now incorporated in the ER sheet for better clarity.	
Documentation Provided as Evidence by Project Participant:	
ER sheet version 9	
Information Verified by Lead Assessor:	
ER sheet Version 9 dated 25/09/2013	
Reasoning for not Acceptance or Acceptance and Close Out:	
The complete daily diesel consumption values have been reported in the ER sheet for the entire months April 2010 and April 2012. Also the PP incorporated the diesel consumption sheet in the ER sheet itself. Closed. CAR is closed.	
Acceptance and Close out by Lead Assessor: Closed	Date: 30/09/2013
Lead Assessor Comment:	Date: 06/11/2013
<ol style="list-style-type: none"> 1. The value of project emissions has been reported in decimal places in section E.4 of the MR and under the tab "CERs - MP1 of CP2 Verification" in the ER sheet of MP1 of CP2. The PP is requested to report all the baseline, project emissions and total emission reduction consistently, conservatively either in decimal places or whole number. Open. 2. The title of the project reported in the ER sheet of MP1 of CP2 under the tab "CERs - MP1 of CP2 Verification" (cell D2), in the ER sheet of CP2 under the tab "CERs" (please refer cell F3) is not consistent with the project title indicated in the UNFCCC project webpage. Open. 3. In the ER sheet of MP1 of CP2 under the tab "CERs - MP1 of CP2 Verification" (cell A52) the "period" has been reported as "month". Please correct the same. 4. In the ER sheet of MP1 of CP2 under the tab "Diesel consp 2011" last day of the month November has been repeated twice. PP shall clarify. Also under the tab "Diesel consp 2012" a note can be added for the month June 2012 stating that the diesel consumption upto only 24th June 2012 which is the last day of the monitoring period is reported not for the whole month of June 2012 for clarity. 5. The PP is requested to submit the original registered PDD (i.e approved RCP PDD dated 23/11/2010) transferred to the VVS track PDD template with no changes done (i.e prior to the corrections done). 	
CAR is reopened.	
Project Participant Response:	Date: 12/11/2013
Now all the values have been reported in whole number format in ER sheet as well in MR	
Title of the project in both the ER sheet of MP1 of CP2 & ER sheet of CP2 have been now revised	
cell A52 of ER sheet corrected to "Period"	
Diesel consumption was recorded twice in log sheet on last day of the month, the same is now corrected in Diesel consumption excel sheet and reported in one entry for the same day as a whole. A note on last day of the monitoring period is described for better clarity	
Approved RCP PDD dated 23/11/2010 (before corrections done) is now submitted to DOE	
Documentation Provided as Evidence by Project Participant:	
<i>Approved RCP PDD dated 23112010.doc</i> <i>CERs for 2nd CP V5.xls</i> <i>CERs MP1 of CP2 v10.xls</i> <i>CERs MP1 of CP2 v10.doc</i>	
Information Verified by Lead Assessor:	
Approved RCP PDD dated 23/11/2010 in VVS format. Revised MR dated 12/11/2013 (The PP didn't change the MR version however since the earlier version was version 10 this version has been considered as version 11) Revised ER sheet of MP1 of CP2 version 11 dated 12/11/2013 Revised ER sheet of CP2 Version 5 dated 12/11/2013	

Reasoning for not Acceptance or Acceptance and Close Out:	
<ol style="list-style-type: none"> 1. The value of project emissions has been reported consistently in section E.4 of the revised MR and also under the tab "CERs - MP1 of CP2 Verification" in the revised ER sheet of MP1 of CP2. Closed. 2. The title of the project reported in the revised ER sheet of MP1 of CP2 and also in the ER sheet of CP2 now consistent with the project title indicated in the UNFCCC project webpage. Closed. 3. In the revised ER sheet of MP1 of CP2 under the tab "CERs - MP1 of CP2 Verification" the "month" has been corrected as "period" which is appropriate. Closed 4. The PP clarified that on 30th Nov 2011 the diesel consumption was recorded twice thus it was reported in the ER sheet twice however the total consumption has been reported in the revised ER sheet for clarity. Also under the tab "Diesel consp 2012" a note has been added for the month June 2012 stating that the diesel consumption upto only 24th June 2012 which is the last day of the monitoring period is reported not for the whole month of June 2012 for clarity. Closed. 5. The PP submitted the original registered PDD (i.e approved RCP PDD dated 23/11/2010) transferred to the VVS track PDD template with no changes done (i.e prior to the corrections done). Closed 6. The appendix 6 of the revised PDD (with post registration changes done) version 7 dated 04/09/2013 states that "Not Applicable" which is not correct. Please clarify. 	
CAR is open.	
Acceptance and Close out by Lead Assessor: Open	Date: 13/11/2013
Project Participant Response:	Date: 14/11/2013
Post registration changes done is now described in appendix 6 of registered PDD version 8	
Documentation Provided as Evidence by Project Participant:	
<i>GSIL PDD_v8.docx</i> <i>CERs MP1 of CP2 v12.docx</i>	
Information Verified by Lead Assessor:	
Revised PDD Version 8 dated 14/11/2013	
MR Version 12 dated 14/11/2013 using the latest MR template version of 3.2.	
Reasoning for not Acceptance or Acceptance and Close Out:	
The appendix 6 of the revised PDD version 8 includes the details about the post registration changes. Also the PP submitted the MR version 12 using the latest MR template of version 3.2. Closed.	
CAR is closed.	
Acceptance and Close out by Lead Assessor: Closed	Date: 14/11/2013
Lead Assessor Comment:	Date: 11/12/2013
The header of the clean pdf version of the revised PDD (Version 8 dated 14/11/2013) submitted found to be inconsistent with respect to the PDD template (formatting error) though the track change version submitted found to be appropriate. The PP is requested to clarify.	
CAR is reopened.	
Project Participant Response:	Date: 14/12/2013
The correct revised PDD in clean pdf version submitted.	
Documentation Provided as Evidence by Project Participant:	
<i>GSIL PDD_v8.pdf</i>	
Information Verified by Lead Assessor:	
Clean Pdf version of revised PDD version 8.	
Reasoning for not Acceptance or Acceptance and Close Out:	
The clean pdf version of revised PDD (Version 8 dated 14/11/2013) submitted now found to be consistent with the PDD template as well as consistent with the track change version of revised PDD submitted earlier with respect to the header formatting. The PP has not changed the version and date of the PDD (revised) which is accepted by the assessment team as only the formatting error corrected in the clean copy of the revised PDD and no other change done in the PDD.	
CAR is closed.	
Acceptance and Close out by Lead Assessor: Closed	Date: 16/12/2013

Date:	20/06/2013	Raised by:	Assessment Team		
Type:	CAR	Number:	4	Reference:	TR Stage
Lead Assessor Comment:			Date: 20/06/2013		
1. The specific date of implementation start is not mentioned in sections A.1 and B.1 of the MR however only year is mentioned. Please clarify.					
2. The tools referred by methodology and applicable for project activity are not mentioned as per MR completion guidance EB70, Annex11 in section A.4 of MR. Also the section B.1 does not mention “description of the installed technology (ies), technical process and equipment as per MR completion guidance EB70, Annex11. Please clarify.					
3. The NCV value of diesel (NCV_{diesel}) which is fixed ex-ante in the revised PDD (approved RCP PDD) is not in line with the tool “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” ,Version 2 (EB41 Annex11) and the description of the parameter “ $EF_{diesel} / EF_{CO2,i,y}$ ” is not in line with tool EB41 Annex 11. Also the web link of CEA database indicated in section D.1 of the MR is not working. The PP shall clarify.					
4. In section D.2 for the parameters “ $EG_{export,y}$ ” and “ $EG_{import,y}$ ” in the calibration details of Energy meters the dates have been reported as “calibration validity” dates however as per the calibration certificates provided it is “calibration due date”. Please clarify.					
5. The ER value of the current monitoring period has been reported in section E.7 of the MR. However as per template, this section is applicable if the monitoring period is beyond the 31/12/2012. Please clarify.					
CAR is open.					
Project Participant Response:			Date: 12/07/2013		
Exact date of start date is now provided in revised MR section A.1					
Section A.4 is now revised mentioning the tools and references					
NCV_{diesel} is now in consistent with the “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion”					
Description for calibration in section D.2 is now clear in revised MR					
Section E.7 is now revised as per template					
Documentation Provided as Evidence by Project Participant:					
CERs MP1 of CP2 v7.doc					
Information Verified by Lead Assessor:					
Revised MR version 7 dated 12/07/2013					
ER sheet version 7 dated 12/07/2013					
Revised PDD version 6 dated 12/07/2013					
Reasoning for not Acceptance or Acceptance and Close Out:					
1. The specific date of implementation start is now mentioned in sections A.1 and B.1 of the revised MR. Closed.					
2. The tools referred by methodology and applicable for project activity are not mentioned as per MR completion guidance EB70, Annex11 in section A.4 of MR. Also the version no. has not been indicated. Please clarify. Open.					
3. The PP has submitted the revised PDD with the correction of NCV value of diesel (NCV_{diesel}) in line with the tool “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” ,Version 2 (EB41 Annex11) however the description of the parameter “ $EF_{diesel} / EF_{CO2,i,y}$ ” is not explicit in line with tool EB41 Annex 11 also the all the changes done from the registered RCP PDD is not in track change mode. Also PP is requested to submit the revised ER sheet as there is change in the default value considered.Open.					
4. The PP revised section D.2 for the parameters “ $EG_{export,y}$ ” and “ $EG_{import,y}$ ” in the calibration details of Energy meters the dates as “calibration due date” which is appropriate. Closed					
5. The PP revised the section E.7 of the revised MR appropriately as “Not Applicable” as the monitoring period is not beyond the 31/12/2012. Closed.					
CAR is open.					

Acceptance and Close out by Lead Assessor: Open	Date: 16/08/2013
Project Participant Response:	Date: 04/09/2013
Tools applicable to project activity have been now specified in MR. Revised PDD and Revised CER sheet is now submitted to DOE	
Documentation Provided as Evidence by Project Participant:	
Revised MR version 8 Revised PDD version 6	
Information Verified by Lead Assessor:	
Revised MR version 8 dated 04/09/2013 Revised PDD Version 7 dated 04/09/2013. Revised ER sheet for CP2 Version 4 dated 04/09/2013.	
Reasoning for not Acceptance or Acceptance and Close Out:	
<ol style="list-style-type: none"> 1. The tools referred by methodology and applicable for project activity are now mentioned as per MR completion guidance EB70, Annex11 in section A.4 of revised MR. Also the version no. is indicated now. However the font is not consistent in this section. Open. 2. The description of the parameter "$EF_{\text{diesel}} / EF_{\text{CO}_2,i,y}$" is now explicit in line with tool EB41 Annex 11 also the all the changes done from the registered RCP PDD is now in track change mode. Also PP is submitted the revised ER sheet as there is change in the default value considered. However the version of the PDD hasn't been revised thus the PP is requested to revise the Version no. as 7 dated 04/09/2013 and submit the same. Open. 	
CAR is open.	
Acceptance and Close out by Lead Assessor: Open	Date: 23/09/2013
Project Participant Response:	Date : 25/09/2013
The font in section A.4 of revised MR is now consistent. Version no. of the PDD is now revised to No.7.	
Documentation Provided as Evidence by Project Participant:	
Revised MR version 9 Revised PDD Version 7	
Information Verified by Lead Assessor:	
Revised MR Version 9 dated 25/09/2013 Revised PDD Version 7 dated 04/09/2013	
Reasoning for not Acceptance or Acceptance and Close Out:	
<ol style="list-style-type: none"> 1. The font has been corrected in section A.4 of the revised MR. Closed. 2. The version of the PDD has been revised thus the PP is requested indicating Version no. as 7 dated 04/09/2013 submitted the same. Closed 	
CAR is closed.	
Acceptance and Close out by Lead Assessor: Closed	Date: 30/09/2013
Lead Assessor Comment:	Date: 08/10/2013
1. The correction made to the description of the parameter " $EF_{\text{diesel}} / EF_{\text{CO}_2,i,y}$ " is not indicated in the section B.2.2 of the MR. Also the PP is requested to indicate explicitly about the change in value of the parameter NCV_{diesel} in the section B.2.2 of the MR for clarity. CAR is reopened.	
Project Participant Response:	Date : 14/10/2013
Correction made to the description of the parameter " $EF_{\text{diesel}} / EF_{\text{CO}_2,i,y}$ " is now indicated in the section B.2.2 of the revised MR.	
Change in value of the parameter NCV_{diesel} is now indicated explicitly in the section B.2.2 of the revised MR for clarity	
Documentation Provided as Evidence by Project Participant:	
CERs MP1 of CP2 v10.docx	
Information Verified by Lead Assessor:	
Revised MR version 10 dated 14/10/2013 ER sheet of MP1 of CP2 version 10 dated 14/10/2013 (The PP revised ER sheet voluntarily and submitted ER sheet Version 10 to be in line with the MR version 10)	
Reasoning for not Acceptance or Acceptance and Close Out:	

1. The corrections made to the description of the parameter " $EF_{\text{diesel}} / EF_{\text{CO2,i,y}}$ " is now indicated in the section B.2.2 of the revised MR. Also the PP indicated explicitly about the change in value of the parameter NCV_{diesel} in the section B.2.2 of the revised MR.

CAR is closed.

Acceptance and Close out by Lead Assessor: Closed	Date: 15/10/2013
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10. Statement of Competence

Statement of Competence

Name: Muthamil Kumaran

Status

- Lead Assessor	X	- Expert	x
- Assessor	X	- Financial Expert	
- Local Assessor	India	- Technical Reviewer	

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	x
Technical Area(s): <i>TA 1.2 Energy generation from renewable energy sources</i>	
2. Energy Distribution	
Technical Area(s):	
3. Energy Demand	
Technical Area(s):	
4. Manufacturing	
Technical Area(s):	
5. Chemical Industry	
Technical Area(s):	
6. Construction	
Technical Area(s):	
7. Transport	
Technical Area(s):	
8. Mining/Mineral Production	
Technical Area(s):	
9. Metal Production	
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	
Technical Area(s):	
12. Solvent Use	
Technical Area(s):	
13. Waste Handling and Disposal	
Technical Area(s):	
14. Afforestation and Reforestation	
Technical Area(s):	
15. Agriculture	
Technical Area(s):	

Approved Member of Staff by: Siddharth Yadav Date: 06/02/2012

Statement of Competence

Name: **Sauvik
Banerjee**

Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	India	- Technical Reviewer	

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	x
Technical Area(s): TA 1.1 Thermal energy generation from fossil fuels and biomass including thermal electricity from solar	
2. Energy Distribution	
Technical Area(s):	
3. Energy Demand	
Technical Area(s):	
4. Manufacturing	
Technical Area(s):	
5. Chemical Industry	
Technical Area(s):	
6. Construction	
Technical Area(s):	
7. Transport	
Technical Area(s):	
8. Mining/Mineral Production	
Technical Area(s):	
9. Metal Production	
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	
Technical Area(s):	
12. Solvent Use	
Technical Area(s):	
13. Waste Handling and Disposal	
Technical Area(s):	
14. Afforestation and Reforestation	
Technical Area(s):	
15. Agriculture	
Technical Area(s):	

Approved Member of Staff by: **Siddharth
Yadav** Date: **02/08/2013**

Statement of Competence

Name: **Vikas Bankar**

Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	India	- Technical Reviewer	x

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	x
Technical Area(s): <i>TA 1.2 Energy generation from renewable energy sources</i>	
2. Energy Distribution	x
Technical Area(s): <i>TA 2.1 Electricity distribution TA 2.2 Heat distribution</i>	
3. Energy Demand	x
Technical Area(s): <i>TA 3.1 Energy Demand</i>	
4. Manufacturing	
Technical Area(s):	
5. Chemical Industry	
Technical Area(s):	
6. Construction	
Technical Area(s):	
7. Transport	
Technical Area(s):	
8. Mining/Mineral Production	
Technical Area(s):	
9. Metal Production	
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	
Technical Area(s):	
12. Solvent Use	
Technical Area(s):	
13. Waste Handling and Disposal	
Technical Area(s):	
14. Afforestation and Reforestation	
Technical Area(s):	
15. Agriculture	
Technical Area(s):	

Approved Member of Staff by: **Siddharth Yadav** Date: **17/07/2012**

Statement of Competence

Name: Shivaji
Chakraborty

Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	India	- Technical Reviewer	x

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)

x

Technical Area(s):

TA 1.1 Thermal energy generation from fossil fuels and biomass including thermal electricity from solar

TA 1.2 Energy generation from renewable energy sources

2. Energy Distribution

x

Technical Area(s): TA 2.1 Electricity distribution

TA 2.2 Heat distribution

3. Energy Demand

x

Technical Area(s): TA 3.1 Energy Demand

4. Manufacturing

Technical Area(s):

5. Chemical Industry

Technical Area(s):

6. Construction

Technical Area(s):

7. Transport

Technical Area(s):

8. Mining/Mineral Production

Technical Area(s):

9. Metal Production

Technical Area(s):

10. Fugitive Emissions from Fuels (solid, oil and gas)

Technical Area(s):

11. Fugitive Emissions from Production and

Consumption of Halocarbons and Sulphur Hexafluoride

Technical Area(s):

12. Solvent Use

Technical Area(s):

13. Waste Handling and Disposal

Technical Area(s):

14. Afforestation and Reforestation

Technical Area(s):

15. Agriculture

Technical Area(s):

Approved Member of Staff by:

Siddharth
Yadav

Date:

19/09/2012

11. Photographic Evidence

Unique reference number:

Meter Sr.No. 01959478

Name of equipment: Energy Meter (Main)

Parameter: Electricity exported to grid &
Electricity imported to project activity

Date: 31/10/2012



Unique reference number:

Meter Sr.No. 01999438

Name of equipment: Energy Meter (Check)

Parameter: Electricity exported to grid &
Electricity imported to project activity

Date: 31/10/2012



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