

VERIFICATION AND CERTIFICATION REPORT

- 2ND PERIODIC -

SHYAM METALICS AND ENERGY LIMITED
(FORMERLY KNOWN AS SHYAM DRI
POWER LIMITED)

SHYAM DRI WHR CPP

UNFCCC REF. No. : 1642

Monitoring Period: 2010-04-01 to 2012-03-31
(incl. both days)

Report No: 8108590384 – 12/078

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Verification Report:	Report No.	Rev. No.	Date of 1st issue:	Date of this rev.
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Project:	Title:	Registration date:	UNFCCC-No.:	
	Shyam DRI WHR CPP	2009-03-25	1642	
	Crediting period:	From:	To:	
	<input type="checkbox"/> Renewable (7y) <input checked="" type="checkbox"/> Fixed (10y)	2009-03-25	2019-03-24	
	Project Scale:			
	<input checked="" type="checkbox"/> Large Scale <input type="checkbox"/> Small Scale			
Project Participant(s):	Client:			
	Shyam Metalics And Energy Limited (formerly known as SHYAM DRI Power Limited)			
	Non Annex 1 country:	Annex 1 country:		
	India	Sweden , Spain		
	PP from non Annex 1 country:	PP from Annex 1 country:		
	Shyam Metalics And Energy Limited (formerly known as SHYAM DRI Power Limited)	Swedish Energy Agency Kingdom of Spain		
Applied methodology/ies:	Title:	No.:	Scope(s) / TA(s)	
	Consolidated baselinemethodology for waste gas and / or heat and/or pressure for power generation	ACM0004 ver. 02	1,4 / 1.1, 4.5	
Monitoring period and monitoring report	Monitoring period (MP):	Monitoring Report:		
	From: To: No. of days:	Draft version:	Final version:	
	2010-04-01 2012-03-31 730	2012-09-28	2013-03-07	
Verification team / Technical Review and Final Approval:	Verification Team:	Technical review:	Final approval:	
	Pankaj Mohan TL&TE Prabhat Kumar TM Vineet Kumar TM	Kunal Rami	Rainer Winter	
Key dates of verification:	Publication of MR :	DVerR issued:	On-site (from):	On-site (to):
	2012-10-03	2012-10-27	2012-10-25	2012-10-27
Summary of Verification opinion	<p>Shyam Metalics And Energy Limited (formerly known as SHYAM DRI Power Limited) has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 2nd periodic verification of the project: "Shyam DRI WHR CPP", with regard to the relevant requirements for CDM project activities.</p> <p>As a result of this verification, the verifier confirms that:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> all operations of the project are implemented and installed as planned and described in the validated project design document, <input checked="" type="checkbox"/> the monitoring plan is in accordance with the applied approved CDM methodology, <input checked="" type="checkbox"/> the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately, <input checked="" type="checkbox"/> the monitoring system is in place and functional. The project has generated GHG emission reductions, and <input checked="" type="checkbox"/> the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. <p>TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as listed below (verified amount).</p>			
Emission reductions:	Total verified amount	As per draft MR:	As per PDD:	



[t CO _{2e}]	181,400	183,617	94,303 /a
		<i>ER achieved up to 2012-12-31</i>	<i>ER achieved from 2013-01-01</i>
		181,400	0
Document information:	Filename:		No. of pages:
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Abbreviations:

ABC	After Burning Chamber
AFBC	Atmospheric Fluidized Bed Combustion
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO₂	Carbon dioxide
CO_{2eq}	Carbon dioxide equivalent
CPP	Captive Power Plant
DG set	Diesel Generator set
DRI Kiln	Direct Reduced Iron Kiln
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse gas(es)
ITFC	Indus Technical & Financial Consultants
MP	Monitoring Plan
MR	Monitoring Report
PA	Project Activity
PDD	Project Design Document
PP	Project Participant
QA/QC	Quality Assurance / Quality Control
STG	Steam Turbo Generator
SV	Site Visit
UNFCCC	United Nations Framework Convention on Climate Change
WHRB	Waste Heat Recovery Boiler
XLS	Emission Reduction Calculation Spread Sheet

Table of Contents	Page
1. INTRODUCTION	8
1.1. Objective	8
1.2. Scope	8
2. GHG PROJECT DESCRIPTION.....	10
2.1. Technical Project Description	10
2.2. Project Location	10
2.3. Project Verification History	11
3. METHODOLOGY AND VERIFICATION SEQUENCE	12
3.1. Verification Steps	12
3.2. Contract review	12
3.3. Appointment of team members and technical reviewers	12
3.4. Publication of the Monitoring Report	14
3.5. Verification Planning	14
3.6. Desk review	16
3.7. On-site assessment	16
3.8. Draft verification reporting	18
3.9. Resolution of CARs, CLs and FARs	18
3.10. Final reporting	19
3.11. Technical review	19
3.12. Final approval	19
4. VERIFICATION FINDINGS.....	20
5. SUMMARY OF VERIFICATION ASSESSMENTS.....	35
5.1. Involved Parties and Project Participants	35
5.2. Implementation of the project	35
5.3. Project history	35
5.4. Post registration changes	36
5.5. Compliance with the monitoring plan	36
5.6. Compliance with the monitoring methodology	36
5.7. Monitoring parameters	37
5.8. Monitoring report	38
5.9. ER Calculation	39
5.10. Quality Management	40
5.11. Comparison with ex-ante estimated emission reductions	40



5.12.	Overall Aspects of the Verification	41
5.13.	Hints for next periodic Verification	41
6.	VERIFICATION AND CERTIFICATION STATEMENT	42
7.	REFERENCES	43
	ANNEX 1: VERIFICATION PROTOCOL	50
	ANNEX 2: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL	102



1. INTRODUCTION

Shyam Metalics And Energy Limited (formerly known as SHYAM DRI Power Limited) has commissioned the TÜV NORD JI/CDM Certification Program (CP) to carry out the 2nd periodic verification of the project

“Shyam DRI WHR CPP”

with regard to the relevant requirements for CDM project activities. The verifiers have reviewed the implementation of the monitoring plan (MP) in the registered CDM project.

GHG data for the monitoring period was verified in detailed manner applying the set of requirements, audit practices and principles as required under the Validation and Verification Standard ^{/VVS/} of the UNFCCC.

This report summarizes the findings and conclusions of this 2nd periodic verification of the above mentioned UNFCCC registered project activity.

1.1. Objective

The objective of the verification is the review and ex-post determination by an independent entity of the GHG emission reductions. It includes the verification of the:

- implementation and operation of the project activity as given in the PDD,
- compliance with applied approved methodology and the provisions of the monitoring plan,
- data given in the monitoring report by checking the monitoring records, the emissions reduction calculation and supporting evidence,
- accuracy of the monitoring equipment,
- quality of evidence,
- significance of reporting risks and risks of material misstatements.

1.2. Scope

The verification of this registered project is based on the validated project design document ^{/PDD/}, the monitoring report ^{/MR/}, emission reduction calculation spreadsheet ^{/XLS/}, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. Furthermore publicly available information was considered as far as available and required.

The verification is carried out on the basis of the following requirements, applicable for this project activity:

- Article 12 of the Kyoto Protocol ^{/KP/},

- guidelines for the implementation of Article 12 of the Kyoto Protocol as presented in the Marrakech Accords under decision 3/CMP.1 ^{/MA/}, and subsequent decisions made by the Executive Board and COP/MOP,
- other relevant rules, including the host country legislation,
- CDM Validation and Verification Standard ^{/VVS/},
- monitoring plan as given in the registered PDD ^{/PDD/},
- Approved CDM Methodology.

2. GHG PROJECT DESCRIPTION

2.1. Technical Project Description

The project activity was commissioned in 2007 and started the commercial production on 12-07-2007. The project was in running condition as checked during site visit. The project activity is having installed 2 WHRB's of 38 tph each. The WHRB Boilers are installed for pressure of 66 kg/cm² and temperature of 490+₅°C . The project boundary also contains the AFBC of 54 tph at 67 kg/cm² and temperature of 490+₅°C . The STG installed is of 30 MW. The generation from WHRB was estimated to be 15MW and rest from AFBC. The process is that the heat contained in waste gases comes in contact with water which converts water to steam and this steam is used to generate electricity. The electricity generated is utilized in the Factory premises only. The extra generation if any is also exported to grid.

The key parameters of the project are given in Table 2-1:

Table 2-1: Technical data of the project activity

Parameter	Unit	Value
WHRB steam generation capacity	tph	38
WHRB Pressure	kg/cm ²	66
WHRB Temperature	°C	490+ ₅
Number of WHRB installed	-	2
AFBC Steam generation capacity	tph	54
AFBC Pressure	kg/cm ²	67
AFBC Temperature	°C	490+ ₅
STG Capacity	MW	30
STG inlet Steam Flow	tph	117
STG inlet Pressure	kg/cm ²	63.7
STG inlet Temperature	°C	485+ ₅

2.2. Project Location

The details of the project location are given in Table 2-2:

Table 2-2: Project Location

No.	Project Location
-----	------------------

Host Country	India
Region:	Sambal Pur District Orrisa State (Now known as Odisha)
Project location address:	Village Pandloi & Nishanbanga, P.O Lapanga / Rengali
Latitude:	21°40'50" N
Longitude:	84° 2' 35" E

2.3. Project Verification History

Essential events since the registration of the project are presented in the following Table 2-3.

Table 2-3: Status of previous Monitoring Periods

#	Item	Time	Status
1	1 st Monitoring period	2009-03-25 to 2010-03-31	Issued
2	2 nd Monitoring period	2010-04-01 to 2012-03-31	Awaiting Issuance Request

An overview of all Post Registration Changes is given in the following table.

Table 2-3: Overview Post Registration Changes

#	Applicable from – to / as of	MP	Type of post registration change ¹⁾	Description	Status ²⁾ / Date
1	20xx-xx-xx to 20xx-xx-xx		TDfrMP	NA	NA
2	20xx-xx-xx to 20xx-xx-xx		TDfMM	NA	NA
3	20xx-xx-xx		CrPDD	NA	NA
4	20xx-xx-xx		PCfrMP	NA	NA
5	20xx-xx-xx		PCfMM	NA	NA
6	20xx-xx-xx		CoPD	NA	NA

- ¹⁾ TDfrMP : Temporary deviation from registered monitoring plan
 TDfMM : Temporary deviation from the monitoring methodology
 CrPDD : Corrections to the registered PDD
 PCfrMP : Permanent changes from registered Monitoring Plan
 PCfMM : Permanent changes from Monitoring Methodology
 CoPD : Changes to the project design of a registered project activity

- ²⁾ Approval (by EB) or Acceptance (by DOE)

3. METHODOLOGY AND VERIFICATION SEQUENCE

3.1. Verification Steps

The verification consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the monitoring report
- A desk review of the Monitoring Report^{/MR/} submitted by the client and additional supporting documents with the use of customised verification protocol^{/CPM/} according to the Validation and Verification Standard^{/VVS/},
- Verification planning,
- On-Site assessment,
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Draft verification reporting
- Resolution of corrective actions (if any)
- Final verification reporting
- Technical review
- Final approval of the verification.

3.2. Contract review

To assure that

- the project falls within the scopes for which accreditation is held,
- the necessary competences to carry out the verification can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

3.3. Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a verification team, consisting of one team leader and 2 additional team members, were appointed.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the Table 3-1 below.

Table 3-1: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Verification competence ⁵⁾	Host country Competence	On-site visit
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Pankaj Mohan	TUV India Pvt. Ltd.	TL ^{A)}	SA	<input checked="" type="checkbox"/>	1.1 & 4.5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Prabhat Kumar	TUV India Pvt. Ltd.	TM ^{A)}	LA	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Vineet Kumar	TUV India Pvt. Ltd.	TM ^{A)}	A	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Kunal Rami	TUV NORD CERT GmbH	TR ^{B)}	SA	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Rainer Winter	TUV NORD CERT GmbH	TR ^{B)} /F ^{A)}	SA	<input checked="" type="checkbox"/>	1.1 & 4.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-

¹⁾ TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

⁵⁾ In case of verification projects

^{A)} Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

^{B)} No team member

All team members contributed to the review of documents, the assessment of the project activity and to the preparation of this report under the leadership of the team leader.

Technical experts contributed to the assessment of special aspects of the project activity, e.g. technical and host country aspects.

In order to qualify further personnel the project team was not accompanied by observers and/or trainees as indicated in the table above. They are usually not considered as team members.

Statements of competence for the above mentioned team members are enclosed in annex 2 of this report.

3.4. Publication of the Monitoring Report

In accordance with the CDM M&P (§ 62) the draft monitoring report, as received from the project participants, has been made publicly available on the dedicated UNFCCC CDM website prior to the verification activity commenced. Comments received are taken into account in the course of the verification, if applicable.

3.5. Verification Planning

In order to ensure a complete, transparent and timely execution of the verification task the team leader has planned the complete sequence of events necessary to arrive at a substantiated final verification opinion.

Various tools have been established in order to ensure an effective verification planning.

Risk analysis and detailed audit testing planning

For the identification of potential reporting risks and the necessary detailed audit testing procedures for residual risk areas table A-1 is used. The structure and content of this table is given in Table 3-2 below.

Table 3-2: Table A-1; Identification of verification risk areas

Table A-1: GHG calculation procedures and management control testing / Detailed audit testing of residual risk areas and random testing				
Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
<i>The following potential risks were identified and divided and structured according to the possible areas of occurrence.</i>	<i>The potential risks of raw data generation have been identified in the course of the monitoring system implementation. The following measures were taken in order to minimize the corresponding risks. The following measures are implemented:</i>	<i>Despite the measures implemented in order to reduce the occurrence probability the following residual risks remain and have to be addressed in the course of every verification.</i>	<i>The additional verification testing performed is described. Testing may include:</i> <ul style="list-style-type: none"> - Sample cross checking of manual transfers of data - Recalculation - Spreadsheet 'walk throughs' to check links and equations - Inspection of calibration and maintenance records for key equipment - Check sampling analysis results 	<i>Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties are highlighted.</i>

Table A-1: GHG calculation procedures and management control testing / Detailed audit testing of residual risk areas and random testing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
			<i>Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.</i>	

The completed table A-1 is enclosed in Annex 1 (table A-1) to this report.

Project specific periodic verification checklist

In order to ensure transparency and consideration of all relevant assessment criteria, a project specific verification protocol has been developed. The protocol shows, in a transparent manner, criteria and requirements, means and results of the verification. The verification protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM project is expected to meet for verification
- It ensures a transparent verification process where the verifying DOE documents how a particular requirement has been proved and the result of the verification.

The basic structure of this project specific verification protocol for the periodic verification is described in Table 3-3.

Table 3-3: Table A-2; Structure of the project specific periodic verification checklist

Table A-2: Periodic verification checklist

Checklist Item	Reference	Verification Team Comments	Draft Conclusion	Final Conclusion
<i>The checklist items in Table A-2 are linked to the various requirements the monitoring of the project should meet. The checklist is organised in various sections as per the requirements of the topic and the individual project activity. It further includes guidance for the verification team.</i>	<i>Gives reference to the information source on which the assessment is based on.</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the verification team and how the assessment was carried out. The reporting requirements of the VVS shall be covered in this section.</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft verification stage.</i>	<i>In case of a corrective action or a clarification the final assessment at the final verification stage is given.</i>

The periodic verification checklist (verification protocol) is the backbone of the complete verification starting from the desk review until final assessment. Detailed assessments and findings are discussed within this checklist and not necessarily repeated in the main text of this report.

The completed verification protocol is enclosed in Annex 1 (table A-2) to this report.

3.6. Desk review

During the desk review all documents initially provided by the client and publicly available documents relevant for the verification were reviewed. The main documents are listed below:

- the last revision of the PDD including the monitoring plan^{/PDD/},
- the last revision of the validation report^{/VAL/},
- documentation of previous verifications^{/VER/}
- the monitoring report, including the claimed emission reductions for the project^{/MR/},
- the emission reduction calculation spreadsheet^{/XLS/}.

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed.

3.7. On-site assessment

As most essential part of the verification exercise it is indispensable to carry out an inspection on site in order to verify that the project is implemented in accordance with the applicable criteria. Furthermore the on-site assessment is necessary to check the monitoring data with respect to accuracy to ensure the calculation of emission reductions. The main tasks covered during the site visit include, but are not limited to:

-
-
- The monitoring data were checked completely.
- An assessment of the implementation and operation of the registered project activity as per the registered PDD or any approved revised PDD;
- A review of information flows for generating, aggregating and reporting the monitoring parameters;
- The data aggregation trails were checked via spot sample down to the level of the meter recordings.
- Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PDD;
- A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;
- A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PDD and the selected methodology and corresponding tool(s), where applicable;
- A review of calculations and assumptions made in determining the GHG data and emission reductions;
- An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.
-

Before and during the on-site visit the verification team performed interviews with the project participants to confirm selected information and to resolve issues identified in the document review.

Representatives of Shyam Metalics And Energy Limited (formerly known as SHYAM DRI Power Limited) and Indus Technical & Financial Consultants (project consultant) including the operational staff of the plant were interviewed. The main topics of the interviews are summarised in Table 3-4.

Table 3-4: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
1. Projects & Operations Personnel ^{/IM01/} 2. Consultant ^{/IM02/}	<ul style="list-style-type: none"> - General aspects of the project - Technical equipment and operation - Changes since validation / previous verification - Monitoring and measurement equipment - Remaining issues from validation/ previous verification - Calibration procedures - Quality management system

Interviewed Persons / Entities	Interview topics
	<ul style="list-style-type: none"> - Involved personnel and responsibilities - Training and practice of the operational personnel - Implementation of the monitoring plan - Monitoring data management - Data uncertainty and residual risks - GHG emission reduction calculation - Procedural aspects of the verification - Maintenance - Environmental aspects

The list of interviewees is included in chapter 7.4.

3.8. Draft verification reporting

On the basis of the desk review, the on-site visit, follow-up interviews and further background investigation the verification protocol is completed. This protocol together with a general project and procedural description of the verification and a detailed list of the verification findings form the draft verification report. This report is sent to the client for resolution of raised CARs, CLs and FARs.

3.9. Resolution of CARs, CLs and FARs

Nonconformities raised during the verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CARs) are issued, if:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- Issues identified in a FAR during validation or previous verifications requiring actions by the project participants to be verified during verification have not been resolved.

The verification team uses the term Clarification Request (CL), which is issued if:

- information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

Forward Action Requests (FAR) indicate essential risks for further periodic verifications. Forward Action Requests are issued, if:

- the monitoring and reporting require attention and / or adjustment for the next verification period.

For a detailed list of all CARs, CLs and FARs raised in the course of the verification pl. refer to chapter 4.

3.10. Final reporting

Upon successful closure of all raised CARs and CLs the final verification report including a positive verification opinion can be issued. In case not all essential issues could finally be resolved, a final report including a negative verification opinion is issued.

The final report summarizes the final assessments w.r.t. all applicable criteria.

3.11. Technical review

Before submission of the final verification report a technical review of the whole verification procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.12. Final approval

After successful technical review an overall (esp. procedural) assessment of the complete verification will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the request for issuance can be started.

4. VERIFICATION FINDINGS

In the following paragraphs the findings from the desk review of the monitoring report^{/MR/}, the calculation spreadsheet^{/XLS/}, PDD^{/PDD/}, the Validation Report^{/VAL/} and other supporting documents, as well as from the on-site assessment and the interviews are summarised.

The summary of CAR, CL and FAR issued are shown in Table 4-1:

Table 4-1: Summary of CAR, CL and FAR

Verification topic	No. of CAR	No. of CL	No. of FAR
A – Description of project activity	6	0	0
B – Implementation of project activity	3	1	1
C – Description of monitoring system	2	0	0
D – Data and parameters	3	1	0
E - Calculation of Emission Reductions	1	0	0
SUM	15	2	1

The following tables include all raised CARs, CLs and FARs and the assessments of the same by the verification team. For an in depth evaluation of all verification items it should be referred to the verification protocols (see Annex).

Finding	A1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	A1
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>However with the reference to the MR, the following consolidated CAR A1 has been raised on editorial issues:</p> <ul style="list-style-type: none"> All the abbreviations have to be clearly expanded on first use of instance in the MR. In section A.1 of MR Superscript is not mentioned clearly. The date mentioned as 12-07-2007 is a commercial operation date or synchronising date with grid is not clear. Please justify. Meter serial numbers were not matching with calibration certificates and checked during site visit. <p>Associated checklist question(s): A.1</p>
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<ul style="list-style-type: none"> The MR is revised and this point is taken care. The Superscript are made. The grid synchronisation is most important to start commercial operation. Thus the date of grid synchronisation is used as commercial operation start date. The meter Sr.No. are corrected.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ol style="list-style-type: none"> Revised MR submitted was checked and found that the abbreviations have been clearly explained at first instance. Revised MR submitted was checked and found that the Superscript have been done satisfactorily. Grid synchronization date is taken as commercial operation date was also cross verified during site visit interview of PP. So, accepted by verification team. Revised MR submitted were checked and found that the meter serial numbers of the instruments used for monitoring is matching now with the calibration certificates. Hence accepted. <p>CAR A1 is closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	A2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	A2
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>During the project site visit it was observed that the name of the PP has been changed from SHYAM DRI to Shyam Metalics And Energy Limited (SMEL) w.e.f. 05/01/2010. However this is not Justified in the MR and neither could be found on UNFCCC website. Relevant evidence regarding the name change is also missing.</p> <p>Associated checklist question(s): A.1</p>
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The PP is not changed only change in name is occurred. The name change certificate from registration of company is attached herewith. The HCA is also changed, a copy of revised HCA in new name is provided herewith.</p>
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The verification team confirms the same after verifying the "Certificate for Change in Name" issued by the "Government of India - Ministry of Corporate Affairs, Registrar of companies, West Bengal" submitted by the PP. But as the project was registered on the name of 'Shyam DRI Power Ltd.', the same is being kept in the revised MR as well now.</p> <p>Hence the CAR A2 is now closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	A3
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>Annex 1 parties mentioned on UNFCCC website are missing in the webhosted MR. Also the Host party is not matching with the UNFCCC website.</p> <p>Associated checklist question(s): A.3</p>
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The MR is revised and all the party as per UNFCCC site is provided in revised MR.</p>
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The revised MR provided by PP was checked and found that it mentions the Annex 1 parties and Host party as per UNFCCC website. This was found to be satisfactory so, verification team accepted the corrections and CAR A3 is closed.</p>

Finding	A3
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	A4
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The webhosted MR mentions ACM0002 as well but the UNFCCC website was checked and found no mention of ACM0002 Please justify. Associated checklist question(s): A.4
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Kindly refer to registered PDD section B.1 page no.9, it is mentioned that “ACM0002 Sectoral scope : 01 of EB-36” is also applied.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Page no-9 in section B.1 was checked and found that ACM0002 is referred in the registered PDD. Applied methodology ACM0004 version 02 was also checked from UNFCCC website (http://cdm.unfccc.int/filestorage/C/D/M/CDMWF_AM_XIXYIGMQQIJ65GY3UJCP3R90X4TG75/ACM0004_ver02_EB23_repan8.pdf?t=NXI8bWlhc2U0fDDY7zbxRIM5c8w3xhLysF_M) and found that page no-2 refers the ACM0002 methodology. Hence accepted by verification team and CAR A4 is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	A5
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Length of the crediting period is missing in years. Also the monitoring period dates are also missing. Associated checklist question(s): A.5
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The length of crediting period and monitoring period are now provided in revised MR.

Finding	A5
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The revised MR provided by PP was checked and found that The length of crediting period and monitoring period are now transparently mentioned. This was found to be correct as checked from UNFCCC website by the verification team. CAR A5 is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	A6
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	During the course of verification the MR template got changed from UNFCCC side hence CAR A6 is raised. Associated checklist question(s): A.7
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Latest MR template is used now.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The transfer of information from the old form to the new form is correct and materially the same as the information in the webhosted MR. This was found to be correct as checked from UNFCCC website by the verification team. Hence CAR A6 is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	B1
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR

Finding	B1
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>CAR B1 was raised</p> <ul style="list-style-type: none"> An appropriate description of the installed technology(ies), technical process and equipment incl.diagrams, where applicable, has not been included. In Section B.1 the reference of previous section is not correctly quoted. <p>Associated checklist question(s): B.1</p>
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>1. The section B.1 is revised and this point is taken, thus process flow diagram are incorporated.</p> <p>2. reference of previous section is corrected.</p>
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>1. The section B.1 of the Revised MR was checked and found to be satisfactorily corrected.</p> <p>2. The section B.1 of the revised MR was checked and found that the reference of previous section is correctly quoted now.</p> <p>CAR B1 is closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	B2
Classification	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>However CL B2 has been raised:</p> <ul style="list-style-type: none"> Documentary evidences of project activity i.e. commissioning certificate, technical specifications, auxiliary consumptions, electricity generation were checked during site visit but the copies of documents were missing. <p>Associated checklist question(s): B.1.1</p>
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The commission certificates, and technical specification are provided, the list of auxiliary equipment installed are provided herewith. The specification of TG are provided for generation capacity.</p>
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The PP has submitted the requisite documents. All the documents have been verified with the originals during the site visit and also obtained the scanned copies of the same. Hence the CL B2 is now closed.</p>

Finding	B2
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	B3
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>CAR B3 has been raised:</p> <p>During the project site visit it was observed that DG sets have been added to act as a back up during exigencies. The PDD or the MR does not have the information regarding the DG sets. Please clarify how the electricity generated if any is monitored from this and if the same is deducted from the gross generation.</p> <p>Associated checklist question(s): B.1.3</p>

Finding	B3
<p>Corrective Action #1</p> <p><i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>The DG sets installed as the sites are basically installed for the purpose of providing emergency power mainly to the sponge iron plants and steel plants and partially for emergency backup to the cooling circuit of boiler of power plant. It may be noted that the emergency power requirement will be arising in the power only when none of the source of power is available to the unit i.e. neither coal based power nor power from WHRB nor the power from the grid. It is also an established fact that WHRB power plant has to be run so long as the sponge iron plant in operation and AFBC power plant can be operated according to the requirement of the power.</p> <p>Thus it is not likely to have any emergency power requirement due to these reasons. Over and above this the Orissa State is not having shortage of power and the unit is connected with the grid with EST power supply circuit for import and export of power, therefore, in case of shutdown of both these power sources grid will act as backup power.</p> <p>It is a very remote possibility that when an operating power plant generation has failed and even the grid support is not available during this period only the Emergency auxiliary system for cooling down the boiler tubes will require power. The emergency power requirement in the power plant will not be more than 10% of the connected load for the entire auxiliary system of CPP. In view of this in any worst situation the annual power generation for backup power support during any year may not even be point 1% entire generation.</p> <p>In view of this we feel that it is not required to file a revision in the monitoring plan because the DG sets are installed mainly for safety of the system and not to generate usual power in absence of the operation of CPP or in absence of the availability of the Grid.</p> <p>The available data for the emergency backup power generation and utilization during the current monitoring period reveals that it is about 0.044% of total generation and if compared with Auxiliary power consumed for CPP it comes to 0.459%. Hence this may be ignored as per guideline.</p> <p>DG records for current claim period is being provided herewith</p>

Finding	B3
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>During the site visit it was observed by the verification team that the DG set is not used regularly but the fact is that it will only be used during the complete blackout i.e. when the PP is not having the power from WHRB, AFBC and back up grid. This is the rarest thing which can happen in the industry so the DG set was not included in the monitoring plan by the PP. The verification team checked the LOG books and found that there is hardly any generation from the DG. Also the generated power can only be used in the Auxiliary consumption which is already deducted from the gross generation, hence this is found to be conservative and no Deviation from registered monitoring plan was envisaged.</p> <p>Also as per VVS §87 the project emission from the DG set is less than 1% so this was not included in the monitoring plan by the validated DOE as checked during onsite assessment interview of PP by the verification team.</p> <p>As the Auxiliary consumption is monitored and deducted from the gross generation as checked by the verification team from the logbooks and also checked the single line diagram^{/SLD/}. The physical verification of the site carried out by verification team also proves that the PP has adopted the conservative approach and this is already monitored through auxiliary consumption.</p> <p>The justification provided by the PP with regards to the use of the DG set as an emergency backup is acceptable as per above justification of DOE. Furthermore, it was verified by the verification team that the energy generated through the DG is minimal. Also, the conservative approach utilized by the PP has been verified. Hence the CAR B3 is closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	B4
Classification	<input type="checkbox"/> CAR <input type="checkbox"/> CL <input checked="" type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>The DG sets fuel consumption and electricity generation records will be checked during next verification as well, hence FAR B4 is also raised for the same.</p> <p>Associated checklist question(s): B.1.3</p>

Finding	B4
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The DG set generation and diesel consumption records are being provided herewith for this verification, which confirms that DG sets were not contributing significantly, and as conservative approach electricity supplied through DG sets are included in auxiliary consumption. This will also be maintained & provided for next verification as well.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The DG set generation and diesel consumption records will be checked during next verification as well. FAR B4 is raised.
Conclusion <i>Tick the appropriate checkbox</i>	<input checked="" type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input type="checkbox"/> The finding is closed

Finding	B5
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Break down / shut down records with the exact details of time in hours yet to be submitted. Associated checklist question(s): B.1.4
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The details or breakdown and shutdown and other abnormal operations are provided in revised MR.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Revised MR was checked and found that the details or breakdown and shutdown and other abnormal operations are transparently mentioned as checked by verification team. These were matching with the data checked during site visit. CAR B5 is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	C1
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR

Finding	C1
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The steam flow meter serial number of AFBC was not matching with the serial number mentioned in webhosted MR. Associated checklist question(s): C.1
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	It is to be noted that steam flow meter which mentioned in MR was changed on June 2012, where monitoring period is 01/04/2010 to 31/03/2012, on the date of verification visit this new meter was installed. The meter which is used in monitoring period i.e. Sr. No. 0250457, is calibrated and new meter which was installed at site is also duly calibrated, calibration certificate for both the meters are provided herewith.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	During site visit interview and meter change documents this was confirmed that the steam flow meter was changed in June 2012 and meter is calibrated. The earlier meter (Sr. No. 0250457) prior to June 2012 was also calibrated. Both calibration certificates were obtained and cross checked with original copies during site visit. This was accepted as the change meter is not within this monitoring period of verification. CAR C1 was closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	C2
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Evidences to the internal audit were missing. Furthermore, the standard operating procedures (SOP) for internal QA/QC for project activity monitoring parameters, along with internal audit report were missing. Associated checklist question(s): C.3
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Kindly find attached herewith Internal Audit Report, as well as standard operating procedure for QA/QC.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The Internal Audit reports and SOP provided for QA/QC of the project activity were checked and found to be satisfactory. This was also cross verified during site visit interview of PP & consultant. This was accepted and CAR C2 was closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	D1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>During the onsite review of the log sheets it was observed that the entry from 01/04/2010 to 30/04/2010 for auxiliary consumption is not matching. Justification required on how the required parameter was monitored for this month.</p> <p>Associated checklist question(s): D.2.2</p>		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The parameter were monitored correctly but there was an error in calculation of parameter. The log sheet is provided herewith. As conservative approach for this period we total auxiliary load is calculated and considered that what is maximum auxiliary load level and that auxiliary load is considered for entire month i.e. for 01/04/2010 to 30/04/2010.</p> <p>The total auxiliary load is about 3.42 MWh which equals to $3.42 \times 24 \text{ hours} = 82.08 \text{ MWh/day}$ which is consistently considered for entire month of April 2010.</p> <p>Kindly note that it is the conservative approach as actual recorded value of auxiliary power consumed recorded is 1497.7MWh, whereas on considering entire auxiliary connected load for this period the auxiliary power consumption comes to 2462.4 MWh by doing this we have considered 965.66 MWh addition auxiliary power consumed which will result in reduced emission reduction thus being conservative approach we herewith request you to kindly consider the same.</p>		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The auxiliary consumption data log sheet was checked with spreadsheet and found that the PP has taken the total installed auxiliary load, for calculation purpose for the month of April 2010. This was found to be conservative approach and hence accepted by verification team. The calculations were also found to be correct. CAR D1 was closed.</p>		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	D2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>CAR D2 is raised as import meter is not calibrated yearly.</p> <p>Associated checklist question(s): D.2.13b</p>		

Finding	D2
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>Kindly note that this parameter does not have any role to play in calculation of emission reduction</p> <p>Further to this Kindly note that this meter is under control of grid authorities and PP does not control over it. The grid authorities were responsible for calibration of this meter. But delayed calibration was there and provided to the DOE.</p>
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The import meter has no role in emission reduction calculation as checked from the registered PDD and applied methodology ACM0004 version 02 by the verification team. Still the calibration of the import meter was checked as per registered monitoring plan and found that the calibration was delayed and certificate was provided by PP. The % error reported was same as mentioned in previous calibration so maximum permissible error was applied. This was found to be in line with VVS version 3.0 § 238-239. This was accepted by VT and CAR D2 is closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	D3
Classification	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>JMR data for import and export are missing.</p> <p>Associated checklist question(s): D.2.13c</p>
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The JMR data regarding import and export is being provided herewith.</p>
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The verification team has cross checked the revised MR for inclusion of data related to the said parameters i.e. Electricity Import and Export. The same was verified during the site visit.</p> <p>Hence CL D3 is now closed.</p>
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	D4
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR

Finding	D4
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR D4 was raised as the calibration is delayed for export meter. Associated checklist question(s): D.2.14b
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Kindly note that this parameter does not have any role to play in calculation of emission reduction Further to this Kindly note that this meter is under control of grid authorities and PP does not control over it. The grid authorities were responsible for calibration of this meter. But delayed calibration was there and provided to the DOE.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The Export meter has no role in emission reduction calculation as checked from the registered PDD and applied methodology ACM0004 version 02 by the verification team. Still the calibration of the export meter was checked as per registered monitoring plan and found that the calibration was delayed and certificate was provided by PP. The % error reported was same as mentioned in previous calibration so maximum permissible error was applied. This was found to be in line with VVS version 3.0 § 238-242. This was accepted by VT and CAR D4 is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding	E1
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Spreadsheet is missing. Associated checklist question(s): E.1
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The spread sheet regarding emission reduction is being provided herewith.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The PP has submitted a traceable and appropriately linked ER calculation spreadsheet. The same mention all the parameters involved and is consistent with the MR and the registered PDD. Furthermore, the applied formulae for the calculations are in line with the applied methodology ACM0004 version 02. The calculations are complete and in accordance with the monitoring plan of the registered PDD. The same has been verified by the verification team with the log book records and the meter readings and found to be accurate and conservative. There is error in the calculation of CER. The CAR E1 is therefore open.

Finding	E1
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The spreadsheet was checked by PP and got the corrections done for delayed calibration of generation meter due to which CERs got reduced by 3tCO ₂ and hence the CERs reduced from 181,403 tCO ₂ to 181,400 tCO ₂ .
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The revised Spreadsheet submitted was checked and found that the calculation was corrected and CERs got reduced from 181,403 tCO ₂ to 181,400 tCO ₂ due to the delayed calibration of Generation meter. This was accepted and hence CAR is closed
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

5. SUMMARY OF VERIFICATION ASSESSMENTS

The following paragraphs include the summary of the final verification assessments after all CARs and CRs are closed out. For details of the assessments pl. refer to the discussion of the verification findings in chapter 4 and the verification protocol (Annex 1).

5.1. Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity.

Table 5-1: Project Parties and project participants

Characteristic	Party	Project Participant
Non-Annex 1	India	Shyam Metalics And Energy Limited (formerly known as SHYAM DRI Power Limited)
Annex 1	Sweden	Swedish Energy Agency
Annex 1	Spain	Kingdom of Spain

5.2. Implementation of the project

During the verification a site visit was carried out. On the basis of this site visit and the reviewed project documentation it can be confirmed that w.r.t. the realized technology, the project equipments, as well as the monitoring and metering equipment, the CPP of the project has been implemented and operated as described in the registered PDD.

5.3. Project history

During the course of the validation no FAR was raised for the project activity. Furthermore, there have been no requests for deviation or revision in monitoring plan for the same.

The project activity entails the use of waste heat contained in waste flue gases released from ABCs of 2 DRI kilns to generate electricity. The heat contained in waste gases will be transferred to water, which in turn will convert water into steam in 2 WHRBs generating steam to generate power. The steam produced will be fed into a STG to generate a total of 15 MW electricity. The power so generated shall mainly be used to meet the captive power requirement of the SHYAM DRI Plant itself, surplus power will be exported to the CSEB grid.

The monitoring plan as described in Section B.7.1, B.7.2. and Annex 4 of the registered PDD is being followed.

Furthermore as this is the 2nd periodic verification issues from 1st verification is considered and CAR B3 was raised and successfully closed. FAR B4 was also raised for next verification. Please refer section 5.5 for details along with section 4 above for the DOE Assessments of the mentioned CAR B3 and FAR B4 respectively.

5.4. Post registration changes

No post registration changes applicable for this monitoring period have been observed during the monitoring period.

5.5. Compliance with the monitoring plan

The monitoring system and all applied procedures are completely in compliance with the registered monitoring plan. All the parameters to be monitored are mentioned in the MR^{/MR1/} and are in accordance with the registered PDD as well as the applied methodology ACM0004 Version 2. Furthermore, during the site visit, DG sets were observed to be installed in case of exigencies. The total diesel consumption for the entire monitoring period is 41,901 litres leading to a total power generation of 164.217 MWh. The same has been verified from the DG set logbooks on site. As it was verified that the DG sets are not used regularly and do not contribute to more than 1% of the project emissions¹ (0.044%), therefore a deviation or revision in MP for the inclusion of the DG sets has not been sought for the project activity. A CAR B3 has been raised and closed successfully. FAR B4 is also raised for the same and this will also be checked during next verifications as well.

The parameters are monitored as specified in Section D of the MR. The same will be checked during subsequent verifications. QA/QC procedures are also adequately mentioned in the MR. All the monitored data will be archived for a period of 2 years after the crediting period.

5.6. Compliance with the monitoring methodology

The monitoring system is in compliance with the applied monitoring methodology, ACM0004 Version 2 as well as the Clarification F-CDM-AM-Clar_Resp_ver 01.1 - AM_CLA_0067. All applicable monitoring parameters are mentioned in the monitoring plan of the MR^{/MR2/}. Furthermore, during the site visit and the interviews conducted it was verified by the verification team that the monitoring system is in compliance with the applied methodology.

¹ Applying default NCV for Diesel Oil as per IPCC 2006 Table 1.2 of 43.3 TJ/Gg (at upper confidence level), CO2 emission factor as per IPCC 2006 Table 1.4 for Diesel oil of 74.8 t/TJ (at upper 95% confidence level) and density of diesel of 0.85 g/cm³ as per <http://www.kfz-tech.de/Formelsammlung/Dichte.htm> as per the emissions from DG set are 115.35 tCO₂ (41,901*0.85*43.3*74.8/1,000,000) in contrast to the final emission reductions of 181,400 tCO₂

5.7. Monitoring parameters

During the verification all relevant monitoring parameters mentioned in the MR^{/MR1/} (as also listed in chapter B.7.1, B.7.2 and Annex 4 of the registered PDD) have been verified with regard to the appropriateness of the applied measurement / determination method, the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures.

It can be confirmed that all monitoring parameters have been measured / determined without material misstatements and in line with all applicable standards and relevant requirements. Please refer Section D. Of Annex 1 for the details of the parameters monitored. The calibration of measurement equipment has been conducted at the Frequency as specified by the methodology and monitoring plan of the registered PDD. The details are as following:

Meter indication as per MR D.2	Serial number	Date of calibration	Validity	Delayed calibration (Yes/No)
Generation meter TG	06607878	26/03/2010	25/03/2011	No
		25/03/2011	24/03/2012	No
		30/03/2012	29/03/2013	Yes
Auxiliary meter Aux 1	98001/2-2406	25/11/2009	24/11/2010	No
		19/11/2010	18/11/2011	No
		18/11/2011	17/11/2012	No
Auxiliary meter Aux 2	98001/3-2406	25/11/2009	24/11/2010	No
		19/11/2010	18/11/2011	No
		18/11/2011	17/11/2012	No
Flow transmitter WHRB#1	231407	29/12/2009	28/12/2010	No
		20/12/2010	19/12/2011	No
		10/12/2011	09/12/2012	No
Flow transmitter WHRB#2	231408	29/12/2009	28/12/2010	No
		20/12/2010	19/12/2011	No
		10/12/2011	09/12/2012	No
Flow transmitter AFBC	0250457	29/12/2009	28/12/2010	No
		20/12/2010	19/12/2011	No
		10/12/2011	09/12/2012	No
Flow transmitter TG	0292898	29/12/2009	28/12/2010	No
		24/12/2010	23/12/2011	No
		10/12/2011	09/12/2012	No
Temp. Transmitter WHRB#1	231360	27/12/2009	26/12/2010	No
		20/12/2010	19/12/2011	No
		10/12/2011	09/12/2012	No
Temp. Transmitter	231361	27/12/2009	26/12/2010	No
		20/12/2010	19/12/2011	No

WHRB#2		10/12/2011	09/12/2012	No
Temp. Transmitter AFBC	00250462	27/12/2009	26/12/2010	No
		20/12/2010	19/12/2011	No
		10/12/2011	09/12/2012	No
Pressure. Transmitter WHRB#1	231388	28/12/2009	27/12/2010	No
		20/12/2010	19/12/2011	No
		10/12/2011	09/12/2012	No
Pressure. Transmitter WHRB#2	231391	27/12/2009	26/12/2010	No
		20/12/2010	19/12/2011	No
		10/12/2011	09/12/2012	No
Pressure. Transmitter AFBC	0250454	27/12/2009	26/12/2010	No
		20/12/2010	19/12/2011	No
		10/12/2011	09/12/2012	No
EG Import	WSC 26713	10/12/2009	09/12/2010	No
		10/02/2011	09/02/2012	Yes
		05/03/2012	04/03/2013	Yes
EG Export	APM 03642	22/01/2010	21/01/2011	No
		02/04/2010	01/04/2011	No
		12/04/2011	11/04/2012	Yes

For the Electronic Energy Meters WSC26713 & APM03642 monitoring parameters EG_{IMPORT} and EG_{EXPORT} in accordance to VVS §238 (a) the maximum permissible error of the instrument to the measured values taken during this monitoring period have been applied, as the result of the delayed calibration did not show any errors in the measuring equipment. Based on that and further as the emission reduction related to any of these two parameters DOE can confirm that the error has been applied in a conservative manner (VVS §239 (a)) and has been applied to all measured values during this monitoring period (VVS §239 (b)).

During site visit it was found that the Auxiliary consumption data for 20 days in the month of April 2010 were not matching so the PP took the installed load for the whole month of April 2010. This was accepted by verification team as this was conservative. Also, the generation meter of TG was calibrated by 5 days delay for which the PP has done the corrections and DOE can confirm that the error has been applied in a conservative manner (VVS §239 (a)) and has been applied to all measured values during this 5 days of the monitoring period (VVS §239 (b)).

Please refer also to Section D. of Annex 1 for the details of the parameters monitored. However, CARs D1, D2 and D4 along with CL D3 have been raised and successfully closed. Pl. refer DOE Assessment for details of the same.

5.8. Monitoring report

A draft monitoring report was submitted to the verification team by the project participants. The same is in accordance with EB 70 Annex 11 "Guideline for

completing the monitoring report form". This report was made publicly available on the UNFCCC website prior to the start of the verification activities. No comments were received on the same.

During the verification, mistakes and needs for clarification were identified. A CAR A1 has been raised for the editorial aspects of the MR and the same has been closed successfully. The PP has carried out the requested corrections so that it can be confirmed that the revised Monitoring report^{/MR1/} is complete and transparent and in accordance with the registered PDD and other relevant requirements.

5.9. Sampling

5.9.1. Implementation of the sampling plan

No sampling was required to determine the monitored parameters.

5.9.2. Sampling approaches during verification

No sampling approaches were taken during the verification.

5.10. ER Calculation

During the verification mistakes in the ER calculations were identified and corresponding CARs were raised. Please refer Section E of Annex 1 for details of the same. A revised ER calculation was prepared by the PP and presented to the verification team. The raised CAR E1 was successfully closed. The MR^{/MR1/} was revised accordingly to incorporate the requisite changes. The CERs have been reduced from the proposed 183,617 tCO₂ to 181,400 tCO₂.

Furthermore, with reference to the raised CAR B3, the DG power consumption (164.217MWh) was included in the auxiliary consumption thereby decreasing the emission reduction. The MR^{/MR1/} was revised accordingly to incorporate the requisite changes. Furthermore, the verification team confirms that it has checked the Emission reduction calculation spread sheet^{/XLS/} and found the same to be conservative and acceptable. The cells are also appropriately linked. Furthermore, all the required information is found to be represented transparently. The ER calculations were found to be corrected and conservative. The DOE cross-checked reported data by daily and monthly reports, diesel consumption records^{/LOG/} as well as Joint Meter Readings^{/JMR/} and DCS^{/DCS/} system. After providing related ER spreadsheet and revisions to MR^{/MR2/} DOE can confirm that appropriate methods and formulae for calculating baseline emissions, project emissions and leakage as per registered PDD have been followed. And finally emission factors and default values

that were applied in the calculations are justified as in compliance with registered PDD as determined ex-ante.

Please refer also to DOE assessment and section E of Annex 1 for details of the same.

5.11. Quality Management

Quality Management procedures for measurements, collection and compilation of data, data storage and archiving, calibration, maintenance and training of personnel in the framework of this CDM project activity have been defined. The procedures defined can be assessed as appropriate for the purpose.

It is evident from the monitoring data that the monitoring systems ensure for continuous operations with the exceptions of a few breakdowns. All the measured data are subjected to QA/QC measures.

The PP has provided the CDM Manual and has proper procedures for data handling, accuracy and protections in place. The same have been verified by the verification team. No significant deviations thereof have been observed during the verification. All monitored data are archived both electronically and on paper. The same will be archived for the entire crediting period and additional 2 years as specified in the MR as well as the registered PDD.

5.12. Actual emission reductions during the first commitment period and the period from 1 January 2013 onwards

The MR includes actual ER values achieved up to 31 March 2012 and actual values achieved from 1 January 2013 onwards as follows:

Table 5-2: Emission reductions before and after the end of 2012

	until 2012-12-31 ¹⁾	from 2013-01-01 ¹⁾	Sum
Emission reductions [tCO _{2e}]	181,400	0	181,400

¹⁾ Both days included

5.13. Comparison with ex-ante estimated emission reductions

The revised MR^{MR1/} includes a comparison of the calculated actual emission reductions with the ex-ante values mentioned in the registered PDD.

As per registered PDD, for a monitoring period of 730 days the estimated emission reductions are 188,606 tCO₂. However, the actual value reached during monitoring period is 181,400 tCO₂. Thus the effective emission reduction is less than the estimated in the registered PDD.

5.14. Overall Aspects of the Verification

All necessary and requested documentation was provided by the project participants so that a complete verification of all relevant issues could be carried out.

Access was granted to all installations of the plant which are relevant for the project performance and the monitoring activities.

No issues have been identified indicating that the implementation of the project activity and the steps to claim emission reductions are not compliant with the UNFCCC criteria and relevant guidance provided by the COP/CMP and the CDM EB (clarifications and / or guidance).

5.15. Hints for next periodic Verification

FAR B4 has been raised during the course of the 2nd verification due to observation of diesel consumption of emergency gensets.



6. VERIFICATION AND CERTIFICATION STATEMENT

Shyam Metalics And Energy Limited (formerly known as SHYAM DRI Power Limited) has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 2nd periodic verification of the project: “Shyam DRI WHR CPP”, with regard to the relevant requirements for CDM project activities. The project reduces GHG emissions due to waste heat recovery. This verification covers the period from 2010-04-01 to 2012-03-31(including both days).

In the course of the verification 15 Corrective Action Requests (CAR) and 2 Clarification Requests (CR) were raised and successfully closed. Furthermore 1 FAR is raised to improve the monitoring system in the future. The verification is based on the draft monitoring report, revised monitoring report, the monitoring plan as set out in the registered PDD, the validation report, emission reduction calculation spreadsheet and supporting documents made available to the TÜV NORD JI/CDM CP by the project participant.

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the validated project design document.
- the monitoring plan is in accordance with the applied approved CDM methodology, i.e., ACM0004 ver. 02
- the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately.
- the monitoring system is in place and functional. The project has generated GHG emission reductions.

As the result of the 2nd periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:

Emission reductions: **181,400** t CO_{2e}

Delhi, 2013-03-19

A handwritten signature in blue ink, appearing to read "Pankaj Mohan".

Pankaj Mohan

TÜV NORD JI/CDM Certification
Program

Verification Team Leader

Essen, 2013-03-19

A handwritten signature in blue ink, appearing to read "Rainer Winter".

Rainer Winter

TÜV NORD JI/CDM Certification Program

Final Approval

7. REFERENCES

Table 7-1: Documents provided by the project participant(s)

Reference	Document
/BR/	Breakdown/shutdown/outages records for the 2 nd monitoring period (from 2010-04-01 to 2012-03-31 (first and last days included).
/CAL/	<p>Calibration reports of all meters used in the monitoring procedure;</p> <ol style="list-style-type: none"> 1. Generation Meter (TG) – Serial No. 06607878 – dated 26/03/2010, 25/03/2011, 30/03/2012 valid up to 29/03/2013. 2. Auxiliary Meter (Aux1) – Serial No. 98001/2-2406 – dated 25/11/2009, 19/11/2010, 18/11/2011 valid up to 17/11/2012 3. Auxiliary Meter (Aux2) – Serial No. 98001/3-2406 – dated 25/11/2009, 19/11/2010, 18/11/2011 valid up to 17/11/2012 4. Temp Transmitter WHRB 1 – Serial No. 231360 – dated 27/12/2009, 20/12/2010, 10/12/2011 valid up to 09/12/2012 5. Temp Transmitter WHRB 2 – Serial No. 231361 – dated 27/12/2009, 20/12/2010, 10/12/2011 valid up to 09/12/2012 6. Temp Transmitter AFBC – Serial No. 00250462 – dated 27/12/2009, 20/12/2010, 10/12/2011 valid up to 09/12/2012 7. Pressure Transmitter WHRB 1 – Serial No. 231388 – dated 28/12/2009, 20/12/2010, 10/12/2011 valid up to 09/12/2012 8. Pressure Transmitter WHRB 2 – Serial No. 231391 – dated 28/12/2009, 20/12/2010, 10/12/2011 valid up to 09/12/2012 9. Pressure Transmitter AFBC – Serial No. 0250454 – dated 28/12/2009, 20/12/2010, 10/12/2011 valid up to 09/12/2012 10. Flow Transmitter WHRB 1 – Serial No. 231407 – dated 29/12/2009, 20/12/2010, 10/12/2011 valid up to 09/12/2012 11. Flow Transmitter WHRB 2 – Serial No. 231408 – dated 29/12/2009, 20/12/2010, 10/12/2011 valid up to 09/12/2012 12. Flow Transmitter AFBC – Serial No. 0250457 – dated 29/12/2009,

Reference	Document
	<p>20/12/2010, 10/12/2011 valid up to 09/12/2012.</p> <p>13. Flow Transmitter TG – Serial No. 0292898 – dated 29/12/2009, 24/12/2010, 10/12/2011 valid up to 09/12/2012</p> <p>14. EG Import – Serial No. WSC 26713 – dated 10/12/2009 ,10/02/2011 and 05/03/2012 valid up to 04/03/2013.</p> <p>15. EG Export – Serial No. APM03642 – dated 22/01/2010, 02/04/2010, 12/04/2011 valid up to 11/04/2012.</p> <p>The calibrations cover the monitoring period from 2010-04-01 to 2012-03-31.</p>
/ICC/	<p>Commissioning certificates of WHR Boilers and Turbine generator dated 2011-07-27.</p> <ol style="list-style-type: none"> 1. Commissioning date of WHRB 1 – 2007-06-02 2. Commissioning date of WHRB 2 – 2007-06-20 3. Commissioning certificate of AFBC – 2007-05-01 4. Commissioning certificate of STG – 2007-05-01
/CM/	CDM Manual
/CON/	The signed contract between TUV NORD Cert GmbH and Project Proponent (SHYAM DRI Power Ltd) for carrying out verification of the 2 nd monitoring period (from 2010-04-01 to 2012-03-31) dated 2012-09-28.
/DCS/	Screen shots of the DCS display of the plant.
/JMR/	JMR readings to calculate net energy from/to grid for the monitoring period from 2010-04-01 to 2012-03-31.
/LOG/	Daily and Monthly report containing the performance parameters of the power plant and record of any history with details, maintained at site with a copy being sent to the head of the SHYAM DRI Power Ltd. The data for the monitoring period from 2010-04-01 to 2012-03-31.
/LOG_DG/	Logbook records for the DG sets for the monitoring period i.e. 2010-04-01 to 2012-03-31.
/MR/	Draft Monitoring Report of the registered project “SHYAM DRI WHR CPP” for the period from 2010-04-01 to 2012-03-31, which is webhosted as input for verification process.
/MR1/	Monitoring Report of the registered project “SHYAM DRI WHR CPP” for the

Reference	Document
	period from 2010-04-01 to 2012-03-31, version 02 dated 2013-01-24.
/MR2/	Final Monitoring Report of project “SHYAM DRI WHR CPP” for the period from 2010-04-01 to 2012-03-31, version 03 dated 2013-03-07.
/O&M/	O&M Procedure, preventive maintenance schedule and record
/QP/	QMS procedure for data management and storage.
/SC/	<ol style="list-style-type: none"> 1. Boiler inspection certificate for all the boilers included in the project activity. 2. STG inspection certificate for all the STGs included in the project activity.
/SLD/	Single Line Diagram
/TD/	<ol style="list-style-type: none"> 1. Technical specification of boilers 2. Technical specifications of steam turbogenerators 3. DG Set Specifications
/TRG/	Training records of various training programmes organized on operation & maintenance of equipments and calibration procedure for measurement meters for the verification period 2010-04-01 to 2012-03-31.
/XLS/	Excel – ER calculation spreadsheets provided by the project participant (related to draft monitoring report version 1).
/XLS1/	Excel – ER calculation spreadsheets provided by the project participant (related to monitoring report version 2).
/XLS2/	Excel – ER calculation spreadsheets provided by the project participant (related to final monitoring report version 3).

Table 7-2: Background investigation and assessment documents

Reference	Document
/ACM4/	Approved CDM Methodology “Consolidated baseline methodology for waste gas and/or heat and/or pressure for power generation, ACM0004/ Version 02, Sectoral scope: 01, 3rd March 2006.
/CLA/	Clarification (F-CDM-AM-Clar_Resp_ver 01.1 - AM_CLA_0067) on meth panel meeting dated 2008-04-07 to 2008-04-11.

Reference	Document
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/GLMP/	Guidelines: Completing the monitoring report form (EB 70, Annex 11)
/IPCC/	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book
/KP/	Kyoto Protocol (1997)
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords)
/MRT/	Monitoring Report Form (F-CDM-MR), Version 03.1
/PDD/	Project Design Document for CDM project titled “SHYAM DRI WHR CPP” version 03, dated 2008-04-09
/PS/	CDM Project Standard (Version 02.1, EB 70, Annex 2)
/VAL/	Validation Report for CDM project “SHYAM DRI WHR CPP” Report No. INDIA-VAL/127.49/2008, dated 2009-02-07 by BUREAU VERITAS CERTIFICATION
/VER/	Documents of previous verifications (Monitoring report, verification report, ER calculation sheet)
/VVS/	CDM Validation and Verification Standard (Version 03.0, EB 70, Annex 3)

Table 7-3: Websites used

Reference	Link	Organisation
/cea/	http://www.cea.nic.in/	Central Electricity Authority
/dna/	http://cdmindia.nic.in/	Indian DNA (National CDM Authority, MoEF, India)
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/moef/	http://moef.nic.in/	Ministry of Environment and Forest, Government of India

Reference	Link	Organisation
/mos/	http://steel.nic.in/	Ministry of steel, Government of India
/nesco/	http://www.nescoorissa.com/	North Eastern Electricity Supply Company of Orissa Limited
/oerc/	www.orierc.org	Orissa Electricity Regulatory Commission
/ospcb/	http://www.ospcbboard.org/	Orissa State Pollution Control Board
/sdri/	http://www.shyamgroup.com/shyam_dri.html	SHYAM DRI Power Ltd.
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	D.K. Tiwari	Shyam Metalics And Energy Limited formerly known as SHYAM DRI Power Ltd./ Director
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	L.B. Chaurasia	Shyam Metalics And Energy Limited formerly known as SHYAM DRI Power Ltd / Sr. GM Corporate planning.
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Dayanand Mishra	Shyam Metalics And Energy Limited formerly known as SHYAM DRI Power Ltd / CDM Coordinator.
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Amit Debnath	Shyam Metalics And Energy Limited formerly known as SHYAM DRI Power Ltd / Deputy Manager.
/IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Gopal Bordia	Vice President, ITFC Ltd.
/IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Vikas Thakur	Admin. Officer, ITFC Ltd.



Reference	Mol ¹		Name	Organisation / Function
/IM02/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Ghanshyam Singh	ITFC Ltd.

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Verification Protocol
- A2:** Statements of Competence of
involved Personnel

ANNEX 1: VERIFICATION PROTOCOL

Table A-1: GHG calculation procedures and management control testing / detailed audit testing of residual risk areas and random testing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
Raw data generation				
<ul style="list-style-type: none"> • Installation of measuring equipment • Dysfunction of installed equipment • Maloperation by operational personnel • Downtimes of equipment • Exchange of equipment • Change of measurement equipment characteristic • Insufficient accuracy • Change of technology 	<ul style="list-style-type: none"> • Installation of modern and state of the art equipment • Process control automation • Internal data review • Regular visual inspections of installed equipment • Only skilled and trained personnel operates the relevant equipment • Daily raw data checks • Immediate exchange of dysfunctional equipment • Stand-by duty is 	<ul style="list-style-type: none"> • Inadequate installation / operation of the monitoring equipment • Inadequate exchange of equipment • Change of personnel • Undetected measurement errors • Inappropriateness of Management system procedures w.r.t. monitoring plan requirements (e.g. substitute value strategies) • Non-application of management system procedures • Insufficient accuracy • Inappropriate QA/QC 	<ul style="list-style-type: none"> • Site – visit • Check of equipment • Check of technical data sheets • Check of suppliers information / guarantees • Check of calibration records, if applicable • Check of maintenance records • Counter-check of raw data and commercial data • Check of CDM management system • Check of CDM related procedures 	<ul style="list-style-type: none"> • See Table A-2

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
<ul style="list-style-type: none"> Accuracy of values supplied by Third Parties 	<ul style="list-style-type: none"> organized Training Internal audit procedures Internal check of QA/QC measures of involved Third Parties 	<ul style="list-style-type: none"> measures of Third Parties 	<ul style="list-style-type: none"> Application of CDM management system procedures Check of trainings Check of responsibilities Check of QA/QC documentation / evidences of involved Third Parties 	
Raw data collection and data aggregation				
<ul style="list-style-type: none"> Wrong data transfer from raw data to daily and monthly aggregated reporting forms IT Systems Spread sheet programming Manual data transmission Data protection Responsibilities 	<ul style="list-style-type: none"> Cross-check of data Plausibility checks of various parameters. Appropriate archiving system Clear allocation of responsibilities Application of CDM Management system procedures Usage of standard software solutions 	<ul style="list-style-type: none"> Unintended usage of old data that has been revised Incomplete documentation Ex-post corrections of records Ambiguous sources of information Non-application of management system procedures Manual data transfer mistakes 	<ul style="list-style-type: none"> Check of data aggregation steps Counter-calculation Data integrity checks by means of graphical data analysis and calculation of specific performance figures Check of management system certification Check of data archiving system 	<ul style="list-style-type: none"> See Table A-2

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
	(Spreadsheets) <ul style="list-style-type: none"> Limited access to IT systems Data protection procedures 	<ul style="list-style-type: none"> Unintended change of spread sheet programming or data base entries Problems caused by updating/upgrading or change of applied software 	<ul style="list-style-type: none"> Check of application of Management system procedures 	
Other calculation parameters				
<ul style="list-style-type: none"> Emission factors, oxidation factors, coefficients 	<ul style="list-style-type: none"> The values and data sources applied are defined in the PDD and monitoring plan 	<ul style="list-style-type: none"> Unintended or intended Modification of calculation parameters Wrong application of values Misinterpretations of the applied methodology and/ or the PDD Missing update of applicable regulatory framework (e.g. IPCC values) 	<ul style="list-style-type: none"> Update-check of regulatory framework Countercheck of the applied MP in the MR against the methodology and the PDD 	<ul style="list-style-type: none"> See Table A-2
Calculation Methods				

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
<ul style="list-style-type: none"> Applied formulae Miscalculation Mistakes in spread-sheet calculation 	<ul style="list-style-type: none"> Advanced calculation and reporting tools A CDM coordinator is in charge of the CDM related calculations Usage of tested / counterchecked Excel spreadsheets Involvement of external consultants 	<ul style="list-style-type: none"> The danger of miscalculation can only be minimized. 	<ul style="list-style-type: none"> Countercheck on the basis of own calculation. Spread sheet walk-through. Plausibility checks Check of plots 	<ul style="list-style-type: none"> See Table A-2
Monitoring reporting				
<ul style="list-style-type: none"> Data transfer to the author of the monitoring report Data transfer to the monitoring report Unintended use of outdated versions 	<ul style="list-style-type: none"> An experienced CDM consultant is responsible for monitoring reporting. CDM QMS procedures are defined 	<ul style="list-style-type: none"> The danger of data transfer mistakes can only be minimized Inappropriate application of QMS procedures 	<ul style="list-style-type: none"> Counter check with evidences provided. Audit of procedure application 	<ul style="list-style-type: none"> See Table A-2

Table A-2: (Project specific) Periodic Verification Checklist

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
A. Description of the project activity				
A.1. Purpose and general description of the project activity (EB 70, Annex 11, A.1) <i>Check if section A.1 of the MR includes the following:</i> <ul style="list-style-type: none"> - Purpose of the PA and the measures taken to reduce GHG emissions - Brief description of the installed technology and equipment - Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods etc.) - Total emission reductions achieved in this monitoring period 	/MR/	<p>The verification team has checked section A.1 of the MR and confirms that the information provided is complete and correct with regards to the following:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Purpose of the PA and the measures taken to reduce GHG emissions <input checked="" type="checkbox"/> Brief description of the installed technology and equipments <input checked="" type="checkbox"/> Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods etc) <input checked="" type="checkbox"/> Total emission reductions achieved in this monitoring period <p>In this context the following findings have been identified:</p> <p>However with the reference to the MR, the following consolidated CAR A1 has been raised on editorial issues:</p> <ul style="list-style-type: none"> • All the abbreviations have to be clearly expanded on first use of instance in the MR. • In section A.1 of MR Superscript is not mentioned clearly. • The date mentioned as 12-07-2007 is a commercial operation date or synchronising date with grid is not clear. Please justify. 	CAR A1 CAR A2	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<ul style="list-style-type: none"> Meter serial numbers were not matching with calibration certificates and checked during site visit. <p>Furthermore, the following CAR A2 was also raised:</p> <p>During the project site visit it was observed that the name of the PP has been changed from SHYAM DRI to Shyam Metalics And Energy Limited (SMEL) w.e.f. 05/01/2010. However this is not Justified in the MR and neither could be found on UNFCCC website. Relevant evidence regarding the name change is also missing.</p>		
A.2. Location of project activity (EB 70, Annex 11, A.2) <i>Check if section A.2 of the MR reflects correctly the following:</i> <ul style="list-style-type: none"> Host Party(ies) Region / State / Province etc. City / Town / Community etc. Physical / geographical location (e.g. Latitude and Longitude) 	/MR/ /PDD/ /IM/	<p>The verification team has checked section A.2 of the MR and confirms by means of comparison with the information given in the PDD and information gathered during the site visit that the information provided is complete and correct with regards to the following:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Host Party(ies) <input checked="" type="checkbox"/> Region / State / Province <input checked="" type="checkbox"/> City / Town / Community <input checked="" type="checkbox"/> Physical / Geographical location <p>In this context the following findings have been identified: N/A</p>	OK	OK
A.3. Parties and Project Participants (EB 70, Annex 11, A.3)	/MR/ /unfccc/	<p>The verification team has checked section A.3 of the MR as well as the UNFCCC website and confirms that:</p>	CAR A3	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>Check if section A.3 of the MR includes the following:</p> <ul style="list-style-type: none"> - All PPs as displayed on the UNFCCC website - A correctly filled table as per the MR template 		<p><input type="checkbox"/> all PPs as displayed on the project related UNFCCC website are correctly listed</p> <p><input checked="" type="checkbox"/> the table as per the template MR has been correctly filled</p> <p>In this context the following findings have been identified:</p> <p>CAR A3 was raised.</p> <p>Annex 1 parties mentioned on UNFCCC website are missing in the webhosted MR. Also the Host party is not matching with the UNFCCC website.</p>		
<p>A.4. Reference of applied methodology (EB 70, Annex 11, A.4)</p> <p>Check if section A.4 of the MR correctly describes / includes the following:</p> <ul style="list-style-type: none"> - Reference to the applicable version of the methodology - Reference to the applicable version(s) of relevant methodological tools - Relevant EB decisions, if applicable 	<p>/MR/ /PDD/ /unfccc/</p>	<p>The verification team has checked section A.4 of the MR and confirms by means of comparison with the information given in the PDD and displayed on the UNFCCC website that the information provided is complete and correct with regards to the following:</p> <p><input checked="" type="checkbox"/> Number, title and version of the applicable CDM Methodology</p> <p><input checked="" type="checkbox"/> Name and version of applicable CDM methodological tools</p> <p><input checked="" type="checkbox"/> Relevant EB decisions</p> <p>In this context the following findings have been identified:</p> <p>CAR A4 was raised</p> <p>The webhosted MR mentions ACM0002 as well but the UNFCCC website was checked and found no mention of ACM0002 Please justify.</p>	CAR A4	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
A.5. Crediting period of project activity (EB 70, Annex 11, A.5) <i>Check if section A.5 of the MR correctly includes the following:</i> <ul style="list-style-type: none"> - <i>Start date of the crediting period. In this context please check, if applicable, whether post registration changes to the start date have been accepted by the EB.</i> - <i>Length and type of the crediting period</i> 	/MR/ /unfccc/	<p>The verification team has checked section A.5 of the MR and confirms by means of comparison with the information displayed on the UNFCCC website that the information provided is complete and correct with regards to the following:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Start date of the crediting period. <input checked="" type="checkbox"/> Type and length of the crediting period <p>In this context the following findings have been identified: CAR A5 was raised Length of the crediting period is missing in years. Also the monitoring period dates are also missing.</p>	CAR A5	OK
A.6. Publication of the Monitoring Report (EB70, Annex 3, § 207) <i>Check if the monitoring report has been made publicly available on the UNFCCC website before the verification commenced.</i> <i>Check if comments have been received and if yes, how they have been addressed.</i>	/unfccc/	<p>The verification team has ensured and confirms by means of checking the respective project information on the UNFCCC website that:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The draft monitoring report, as received from the project participants, has been made publicly available prior to the start of the verification activities. <input checked="" type="checkbox"/> No comments have been received. <p>In this context the following findings have been identified: N/A</p>	OK	OK
A.7. Compliance with standardized format of the Monitoring Report (EB70, Annex 3, § 212 e)	/MRT/	<p>The verification team has checked all sections of the MR and confirms by means of comparison with the MR template that:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> the standardized MR template has been used 	CAR A6	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>Check (only) if the latest applicable MR template has been used. For compliance assessment with the MR guideline pl. refer to the respective MR sections.</i>		In this context the following findings have been identified: During the course of verification the MR template got changed from UNFCCC side hence CAR A6 is raised.		
B. Implementation of project activity				
B.1. Description of implemented registered project activity (EB 70, Annex 11, B.1) <i>Check if section B.1 of the MR correctly describes / includes the following:</i> <ul style="list-style-type: none"> - Implementation status of the PA - Detailed description of installed technology(ies) / technical processes and equipment applied - Diagrams (where appropriate) 	/MR/ /PDD/ /PS/ /IM/	<p>The verification team has checked section B.1 of the MR and confirms by means of comparison with the information given in the PDD, the project standard and information gathered during the site visit that:</p> <p><input checked="" type="checkbox"/> the description of the implementation status of the PA is in line with the applicable provisions of the project standard</p> <p><input type="checkbox"/> an appropriate description of the installed technology(ies), technical process and equipment incl. diagrams, where applicable, has been included</p> <p>In this context the following findings have been identified: CAR B1 was raised</p> <ul style="list-style-type: none"> • An appropriate description of the installed technology(ies), technical process and equipment incl. diagrams, where applicable, has not been included. <p>In Section B.1 the reference of previous section is not correctly quoted.</p>	CAR B1	OK
B.1.1. Initial project implementation (EB70, Annex 3; § 225 a, 226) <i>Assess whether the project has been implemented and operated as per the registered PDD and are all</i>	/IM01/ /PDD/	<p><i>Description:</i> The project proponent has commissioned 2 WHRBs (both of 38 TPH capacity, commissioned on 2007-06-02 and 2007-06-20 respectively) and 1 STG (with a generation capacity of 30 MW, commissioned on 2007-02-28). The heat combined in the waste gases is transferred to the water, which further</p>	CLB2	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>physical features of the project in place?</i></p> <p><i>Further focus on the potential phase wise implementation and check the reporting on the corresponding status and starting dates accordingly.</i></p> <p><i>Check if the project is still in compliance with the applicability conditions of the methodology.</i></p> <p><i>Also, discuss – if applicable – the necessity of PRC notifications / approvals.</i></p>		<p>converts the water into steam in the WHRBs. The steam produced is fed into the STG through a common header, to generate electricity from recovered waste heat. The power thus generated is used to fulfil the captive power requirement of the SHYAM DRI Plant itself. This was also checked that there is no change in the applicability condition of the methodology ACM0004 version 02.</p> <p>However CL B2 has been raised:</p> <p>Documentary evidences of project activity i.e. commissioning certificate, technical specifications, auxiliary consumptions, electricity generation were checked during site visit but the documents are missing.</p> <p><i>Verifier's action:</i> The project is already implemented as per the registered PDD and all the physical features of the project are in place. The on -site visit observations and interviews with the project proponent and site in charge corroborate the details in the PDD^{/PDD/} and MR^{/MR/}. However, the documentary evidences still to be reviewed.</p> <p><i>Conclusion:</i> CL B2 was raised</p>		
<p>B.1.2. Technical equipment changes -(EB70, Annex 3; § 225 a, 226)</p> <p><i>Check if relevant technical equipment of the project activity has been exchanged or modified during the monitoring period. Further ensure that consistent notations of key equipment (meters etc.) in PDD, MR and calculation spreadsheet are applied</i></p> <p><i>Consider e.g. interviews with operational personnel,</i></p>	/IM01/ /PDD/	<p><i>Description:</i> As per the onsite observations, verification team has found that technical equipments of the project activity as mentioned in section A.1 of the MR have not been exchanged and/or modified during the entire monitoring period. Specifications of all the relevant technical equipments are as per the section A.2 and Annex 3 of the registered PDD^{/PDD/}.</p> <p><i>Verifier's action:</i> Based on onsite observations and interviews/ Inspection of the technical equipments i.e. STG, WHRBs, AFBC etc. and instrument specifications.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>QMS records, maintenance records, instrument specifications.</i></p> <p><i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.</i></p> <p><i>In case of post registration changes pl. refer to chapter B.2.</i></p>		<p><i>Conclusion:</i> From above observations and documentations, verification team has concluded that no relevant equipments were exchanged during the monitoring period.</p>		
<p>B.1.3. Operation of the project activity -(EB70, Annex 3; § 225 a, 226)</p> <p><i>Check if relevant operation modes of the project activity have been exchanged or modified during the monitoring period.</i></p> <p><i>Consider e.g. interviews with operational personnel, operation log sheets, data management system records.</i></p> <p><i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.</i></p> <p><i>In case of post registration changes pl. refer to chapter B.2.</i></p>	<p>/IM01/ /IM02/ /PDD/</p>	<p><i>Description:</i> As per on site interviews^{/IM01//IM02/}, the CPP started its commercial power generation on 2007-07-12 by synchronizing with Grid. None of the technical equipments of the project activity i.e. STG, WHRBs and associated monitoring equipments have been exchanged or modified during the monitoring period. During the project site visit it was observed that 4 DG sets have been added to act as a back up during exigencies. The PDD or the MR does not have the information regarding the DG sets.</p> <p>CAR B3 has been raised:</p> <p>During the project site visit it was observed that DG sets have been added to act as a back up during exigencies. The PDD or the MR does not have the information regarding the DG sets. Please clarify how the electricity generated if any is monitored from this and if the same is deducted from the gross generation.</p> <p>The DG sets fuel consumption and electricity generation records will be checked during next verifications, hence FAR B4 is also raised for the same.</p>	<p>CAR B3 FAR B4</p>	<p>OK FAR B4</p>

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p><i>Verifier's action:</i> By means of interviews with the operational personnel^{/IM01/}, site visit observations and verification of various records^{/LOG/}, Breakdown / shutdown records^{/BR/} on site. However awaiting submission of all the relevant documents for further review.</p> <p><i>Conclusion:</i> CAR B3 & FAR B4 is raised</p>		
<p>B.1.4. Incidents (EB70, Annex 3; § 225 a, 226)</p> <p><i>Identify if there have been any significant incidents, deviant operation modes and / or downtimes of the equipment?</i></p> <p><i>Consider e.g. interviews with operational personnel, operational log sheets, analysis of performance data.</i></p>	/IM01/	<p><i>Description:</i> During the site visit, the verification team found the appropriate maintenance procedures in place.</p> <p>However, the following CAR B5 has been raised:</p> <p>Break down / shut down records with the exact details of time in hours yet to be submitted.</p> <p><i>Verifier's action:</i> From the onsite visit the verification team can conclude that all the relevant incidences have been identified and enlisted in the MR. The details were verified by means of onsite assessment and verification of log sheets^{/LOG/}, Breakdown / shutdown records^{/BR/} and interviews with the operational personnel^{/IM01/}. Documentary evidence still to be reviewed.</p> <p><i>Conclusion:</i> CAR B5 is raised</p>	CAR B5	OK
<p>B.1.5. Legislation</p> <p>Find out – esp. in the context of methodological requirements - whether relevant legislation with effect on the project activity in the host country has been changed.</p> <p>Assess, in case of changes, whether consequences for the PA with regard to relevant CDM requirements</p>	/IM01/	<p><i>Description:</i> There are no changes in the legislation and sectoral policy w.r.t. project activity. The actual implementation of the project activity is found to be in line with the registered PDD and national legislation of the host country. Though there were no changes in the regulation which can affect the emission reduction of the project activity, the verification team would like to mention that, the EF has been revised by CEA several times</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
have been accounted for. In case of changes data sources shall be referenced.		since the registration of the project activity. However this has no impact on the emission reduction of the project activity as EF is fixed ex-ante. <i>Verifier's action:</i> The national / sectoral regulations were verified from official websites of Ministry of Environment and Forest, Ministry of Steel, North Eastern Electricity Supply Company of Orissa Limited, Orissa Electricity Regulatory Commission, Orissa State Pollution Control Board and Central Electricity Authority. <i>Conclusion:</i> The verification team confirms that the change in legislation has no impact on the project activity.		
B.1.6. Open issues from validation -(EB70, Annex 3; § 213) <i>Check (esp. in case of 1st periodic verification) whether there are any open issues indicated in the validation report (e.g. FAR)?</i>	/VAL/	<input checked="" type="checkbox"/> There were no open issues addressed in the validation report <input type="checkbox"/> All open issues from the validation have been appropriately addressed. <input type="checkbox"/> The following issues related to the validation have not yet been appropriately addressed:	OK	OK
B.1.7. Open issues from previous verification -(EB70, Annex 3; §§ 213; 284 h) <i>Check in case of further periodic verifications whether there are any open issues indicated in previous verification reports (FAR) and take into consideration</i>	/VER/	<input type="checkbox"/> There were no open issues addressed in the previous verification report <input type="checkbox"/> All open issues from the previous verification have been appropriately addressed. <input checked="" type="checkbox"/> The following issues related to the previous verification have not yet been appropriately addressed:	CAR B3 FAR B4	OK FAR B4

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.																						
<i>the guidance as specified in VVS.</i>		Please Refer CAR B3 & FAR B4 above																								
B.2. Post registration changes																										
B.2.1. Are post registration changes applicable to the proposed project activity?	/IM01/ /IM02/	<div><div><input checked="" type="checkbox"/> No, by means of site visit, document check and interview it could be verified that the project is implemented and operated in line with the registered PDD and the applied methodology. (Please proceed with section C)</div><div><input type="checkbox"/> Yes, post registration changes have been identified and are assessed in detail in the subsequent steps. (Please proceed with B.2.2.)</div></div>	OK	OK																						
B.2.2. Temporary deviations from the registered monitoring plan or applied methodology (TDfrMP; TDfMM) <i>(EB 70, Annex 11, B.2.1; EB70, Annex 3; §§ 251 - 256)</i> <i>Indicate whether any temporary deviations have been applied during this monitoring periods. In cases where approval has been sought from the EB please provide reference. If applied, provide a description of the deviation(s). This should include the reasons for the deviation(s), how it deviates from the monitoring plan and/or applied methodology(ies), the duration for which the deviation(s) is(are) applicable and justification on the</i>	/PS/ /unfccc/	<table><tr><td><input checked="" type="checkbox"/></td><td colspan="3">No TDfrMP or TDfMM.have been submitted to the UNFCCC prior to the current monitoring period</td></tr><tr><td rowspan="6"><input type="checkbox"/></td><td colspan="3">The following TDfrMP or TDfMM have been approved or are under approval by the UNFCCC</td></tr><tr><td rowspan="4">1</td><td>Title</td><td></td></tr><tr><td>Status</td><td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td></tr><tr><td>Appr.date</td><td></td></tr><tr><td>Ref. No.</td><td></td></tr><tr><td rowspan="2">2</td><td>Title</td><td></td></tr><tr><td>Status</td><td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td></tr></table>	<input checked="" type="checkbox"/>	No TDfrMP or TDfMM.have been submitted to the UNFCCC prior to the current monitoring period			<input type="checkbox"/>	The following TDfrMP or TDfMM have been approved or are under approval by the UNFCCC			1	Title		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Appr.date		Ref. No.		2	Title		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	OK	OK
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<p><i>conservativeness of the approach. Indicate if the deviation will lead to a reduction in the accuracy and if so, which conservative assumptions and discount factors have been applied.</i></p> <p><i>For deviation(s) that require prior approval by the Board, include the date of approval and reference number.</i></p>		<table border="1"> <tr> <td></td> <td>Appr.date</td> <td></td> </tr> <tr> <td></td> <td>Ref.No.</td> <td></td> </tr> </table>		Appr.date			Ref.No.			
			Appr.date							
			Ref.No.							
		<input type="checkbox"/> During the verification of the current MP no need for a TDfrMP or TDfMM has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA								
		<input type="checkbox"/> An approval of the following TDfrMP or TDfMM is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply.								
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1	Issue:									
2	Issue:									
<p><i>In cases of approved TDfrMP or TDfM the EB guidance has been applied as follows:</i></p>										
<p><i>Detailed description and justification each TDfrMP or TDfM for which appendix 1 is applicable:</i></p>										

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.														
		In this context the following findings have been identified: N/A																
B.2.3. Corrections <i>(EB 70, Annex 11, B.2.2; EB70, Annex 3; §§ 257 - 259)</i> <i>Indicate whether any corrections to project information or parameters fixed at validation have been approved during this monitoring period or submitted with this monitoring report.</i> <i>In cases where the correction(s) and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, provide the approval date and reference number. Otherwise, provide the version number and the completion date of the revised PDD.</i> <i>Please check and report that the corrected information is an accurate reflection of the actual project information and that the corrected parameters are in accordance with the applied methodology and the monitoring plan.</i>	/MR/ /PS/ /unfccc/	<table><tr><td><input checked="" type="checkbox"/></td><td colspan="3">During the verification of the current MP no need for corrections has been identified.</td></tr><tr><td rowspan="3"><input type="checkbox"/></td><td colspan="3">The following corrections have been applied:</td></tr><tr><td>1</td><td>Issue:</td><td></td></tr><tr><td>2</td><td>Issue:</td><td></td></tr></table> <i>Detailed description and justification each correction:</i> In this context the following findings have been identified: N/A	<input checked="" type="checkbox"/>	During the verification of the current MP no need for corrections has been identified.			<input type="checkbox"/>	The following corrections have been applied:			1	Issue:		2	Issue:		OK	OK
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B.2.4. Permanent changes from the registered monitoring plan or applied methodology (PCfrMP; PCfMM)	/MR/ /PS/	<table><tr><td><input checked="" type="checkbox"/></td><td colspan="3">No PCfrMP or PCfMM have been submitted to the UNFCCC prior to the current monitoring period</td></tr><tr><td><input type="checkbox"/></td><td colspan="3">The following PCfrMP or PCfMM have been approved</td></tr></table>	<input checked="" type="checkbox"/>	No PCfrMP or PCfMM have been submitted to the UNFCCC prior to the current monitoring period			<input type="checkbox"/>	The following PCfrMP or PCfMM have been approved			OK	OK						
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<p>(EB 70, Annex 11, B.2.3; EB70, Annex 3; §§ 262 - 268)</p> <p><i>Indicate whether any permanent changes from the registered monitoring plan or applied methodologies have been approved during this monitoring period or submitted with this monitoring report.</i></p> <p><i>In cases where the change(s) and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, provide the approval date and reference number. Otherwise, provide the version number and the completion date of the revised PDD.</i></p>		<table border="1"> <tr> <td colspan="2">or are under approval by the UNFCCC</td> </tr> <tr> <td>1</td> <td> <table border="1"> <tr> <td>Title</td> <td></td> </tr> <tr> <td>Status</td> <td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td>Appr.date</td> <td></td> </tr> <tr> <td>Ref. No.</td> <td></td> </tr> </table> </td> </tr> <tr> <td>2</td> <td> <table border="1"> <tr> <td>Title</td> <td></td> </tr> <tr> <td>Status</td> <td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td>Appr.date</td> <td></td> </tr> <tr> <td>Ref.No.</td> <td></td> </tr> </table> </td> </tr> <tr> <td><input type="checkbox"/></td> <td>During the verification of the current MP no need for a PCfrMP or PCfMM has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA</td> </tr> <tr> <td><input type="checkbox"/></td> <td> An approval of the following PCfrMP or PCfMM is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply. <table border="1"> <tr> <td>1</td> <td>Issue:</td> <td></td> </tr> <tr> <td>2</td> <td>Issue:</td> <td></td> </tr> </table> </td> </tr> <tr> <td><input type="checkbox"/></td> <td> The following PCfrMP or PCfMM for which appendix 1 of the PS is applicable have been applied: <table border="1"> <tr> <td>1</td> <td>Issue:</td> <td></td> </tr> <tr> <td>2</td> <td>Issue:</td> <td></td> </tr> </table> </td> </tr> </table>	or are under approval by the UNFCCC		1	<table border="1"> <tr> <td>Title</td> <td></td> </tr> <tr> <td>Status</td> <td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td>Appr.date</td> <td></td> </tr> <tr> <td>Ref. No.</td> <td></td> </tr> </table>	Title		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Appr.date		Ref. No.		2	<table border="1"> <tr> <td>Title</td> <td></td> </tr> <tr> <td>Status</td> <td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td>Appr.date</td> <td></td> </tr> <tr> <td>Ref.No.</td> <td></td> </tr> </table>	Title		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Appr.date		Ref.No.		<input type="checkbox"/>	During the verification of the current MP no need for a PCfrMP or PCfMM has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA	<input type="checkbox"/>	An approval of the following PCfrMP or PCfMM is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply. <table border="1"> <tr> <td>1</td> <td>Issue:</td> <td></td> </tr> <tr> <td>2</td> <td>Issue:</td> <td></td> </tr> </table>	1	Issue:		2	Issue:		<input type="checkbox"/>	The following PCfrMP or PCfMM for which appendix 1 of the PS is applicable have been applied: <table border="1"> <tr> <td>1</td> <td>Issue:</td> <td></td> </tr> <tr> <td>2</td> <td>Issue:</td> <td></td> </tr> </table>	1	Issue:		2	Issue:			
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<input type="checkbox"/>	During the verification of the current MP no need for a PCfrMP or PCfMM has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA																																											
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Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.																				
		<p><i>In cases of approved PCfrMP or PCfMM the EB guidance has been applied as follows:</i></p> <p><i>Detailed description and justification each TDfrMP or TDfM for which appendix 1 is applicable:</i></p> <p>In this context the following findings have been identified: N/A</p>																						
<p>B.2.5. Changes to the project design of the registered project activity (CoPD) <i>(EB 70, Annex 11, B.2.4; EB70, Annex 3; §§ 269 - 282)</i></p> <p><i>Indicate whether any changes to the project design of the project activity have been approved during this monitoring period or submitted with this monitoring report.</i></p> <p><i>In cases where the change(s) and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, provide the approval date and reference number. Otherwise,</i></p>	/MR/ /PS/	<table><tr><td><input checked="" type="checkbox"/></td><td colspan="3">No CoPD has been submitted to the UNFCCC prior to the current monitoring period</td></tr><tr><td rowspan="6"><input type="checkbox"/></td><td colspan="3">The following CoPD has been approved or are under approval by the UNFCCC</td></tr><tr><td rowspan="4">1</td><td>Title</td><td></td></tr><tr><td>Status</td><td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td></tr><tr><td>Appr.date</td><td></td></tr><tr><td>Ref. No.</td><td></td></tr><tr><td>2</td><td>Title</td><td></td></tr></table>	<input checked="" type="checkbox"/>	No CoPD has been submitted to the UNFCCC prior to the current monitoring period			<input type="checkbox"/>	The following CoPD has been approved or are under approval by the UNFCCC			1	Title		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Appr.date		Ref. No.		2	Title		OK	OK
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provide the version number and the completion date of the revised PDD.		<table border="1"> <tr> <td rowspan="3"></td> <td>Status</td> <td><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td>Appr.date</td> <td></td> </tr> <tr> <td>Ref.No.</td> <td></td> </tr> </table> <input type="checkbox"/> During the verification of the current MP no need for a CoPD has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA <input type="checkbox"/> An approval of the following CoPD.is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply. <table border="1"> <tr> <td>1</td> <td>Issue:</td> <td></td> </tr> <tr> <td>2</td> <td>Issue:</td> <td></td> </tr> </table> <input type="checkbox"/> The following CoPD for which appendix 1 of the PS is applicable have been applied: <table border="1"> <tr> <td>1</td> <td>Issue:</td> <td></td> </tr> <tr> <td>2</td> <td>Issue:</td> <td></td> </tr> </table> <p><i>In cases of approved CoPD the EB guidance has been applied as follows:</i></p> <p><i>Detailed description and justification each CoPD for which appendix 1 of the CDM Project Standard is applicable:</i></p>		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Appr.date		Ref.No.		1	Issue:		2	Issue:		1	Issue:		2	Issue:			
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Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.		
		In this context the following findings have been identified: N/A				
C. Description of monitoring system						
C.1. Monitoring Plan – PDD Compliance (EB 70 Annex 3, §§ 233-236) Check if the monitoring plan is in accordance with the monitoring plan contained in the registered PDD (or any accepted revised MP). Please check esp. if - all parameters stated in the MP of the registered PDD have been monitored and updated as applicable - the monitoring equipment has been controlled and calibrated as per the MP - the monitoring results are consistently recorded as per the approved frequency - QA/QC procedures have been applied in accordance with the MP	/MR/ /PDD/	By means of comparison of the MR with the registered PDD (or any revisions thereof) the verification team has checked whether the MP is in compliance with the registered PDD. The outcome is as follows: <table border="1"><tr><td><input checked="" type="checkbox"/></td><td>The MP is completely in accordance with the last registered/approved version of the PDD / MP.</td></tr></table> In this context the following findings have been identified: CAR C1 was raised The steam flow meter serial number of AFBC was not matching with the serial number mentioned in webhosted MR.	<input checked="" type="checkbox"/>	The MP is completely in accordance with the last registered/approved version of the PDD / MP.	CAR C1	OK
<input checked="" type="checkbox"/>	The MP is completely in accordance with the last registered/approved version of the PDD / MP.					
C.2. Monitoring Plan – Meth Compliance (EB 70 Annex 3, §§ 229-232)	/MR/ /PDD/	By means of comparison of the MR with the applied CDM methodology and related tools the verification team has checked whether the MP is in compliance with the MP related	OK	OK		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.																							
<p><i>Check if the monitoring plan is in accordance with the applied methodology.</i></p> <p><i>In case the methodology references applicable tools it has to be ensured that the MP is also compliant with those tools.</i></p> <p><i>Also please specify if monitoring aspects have been identified that are not specified in the methodology but may enhance the level of accuracy and completeness of the monitoring plan – this esp. applies for SSC PAs.</i></p>	<p>/AM9/ /T-FFC/ /T-EC/ /T-CAD/</p>	<p>requirements of the applied methodology. The outcome is as follows:</p> <table><tr><td><input checked="" type="checkbox"/></td><td colspan="2">The MP is completely in accordance with the approved methodology applied by the CDM project (last registered/approved version of the PDD)</td></tr><tr><td><input checked="" type="checkbox"/></td><td colspan="2">The MP is completely in accordance with the applied tools which the methodology references. A breakdown of the referenced tools is as follows:</td></tr><tr><td rowspan="3">1</td><td>Title (of the tool)</td><td>Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion</td></tr><tr><td>Version</td><td>2</td></tr><tr><td>MP compliance</td><td><input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A (for MP)</td></tr><tr><td rowspan="3">2</td><td>Title (of the tool)</td><td>Tool to calculate baseline, project and/or leakage emissions from electricity consumption</td></tr><tr><td>Version</td><td>1</td></tr><tr><td>MP compliance</td><td><input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A (for MP)</td></tr><tr><td>3</td><td>Title (of the tool)</td><td>Combined tool to identify the baseline scenario and</td></tr></table>	<input checked="" type="checkbox"/>	The MP is completely in accordance with the approved methodology applied by the CDM project (last registered/approved version of the PDD)		<input checked="" type="checkbox"/>	The MP is completely in accordance with the applied tools which the methodology references. A breakdown of the referenced tools is as follows:		1	Title (of the tool)	Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion	Version	2	MP compliance	<input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A (for MP)	2	Title (of the tool)	Tool to calculate baseline, project and/or leakage emissions from electricity consumption	Version	1	MP compliance	<input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A (for MP)	3	Title (of the tool)	Combined tool to identify the baseline scenario and		
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		<table><tr><td></td><td></td><td></td><td>demonstrate additionality</td></tr><tr><td></td><td></td><td>Version</td><td>2.1</td></tr><tr><td></td><td></td><td>MP compliance</td><td><input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A (for MP)</td></tr></table> <p>In this context the following findings have been identified:</p> <p>Regarding aspects that are not specified in the methodology the following issues have been identified which may enhance the level of accuracy and completeness of the MP: N/A</p>				demonstrate additionality			Version	2.1			MP compliance	<input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A (for MP)		
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<p>C.3. Management System (EB 70 Annex 3, § 217 (iii))</p> <p><i>Check if the GHG data monitoring system can be assessed as appropriate.</i></p> <p><i>In case reference is made to a (certified) company quality management system, check if all CDM related monitoring procedures have been fully integrated in the project participant's quality management system.</i></p> <p><i>In case of a stand-alone system, check how the GHG management system has been implemented and effectiveness is ensured.</i></p>	<p>/MR/ /SV/</p>	<p><i>Description:</i> The project proponent i.e. SHYAM DRI Power Ltd. has the CDM management system in place in accordance with the CDM Manual.</p> <p>However, the following CAR C2 has been raised:</p> <p>Evidences to the internal audit were not furnished. Furthermore, the PP is requested to submit standard operating procedures (SOP) for internal QA/QC for project activity monitoring parameters, along with internal audit report.</p> <p><i>Verifier's action:</i> The internal quality policies and procedures are found to be in place. As per the interviews with the project proponent^{/IM01/}, site in-charge^{/IM01/} and the on-site observations, daily logbooks^{/LOG/} for the monitoring of various GHG parameters are being verified by the monitoring in-charge and manager in charge.</p>	<p>CAR G2</p>	<p>OK</p>												

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		Conclusion: CAR C2 was raised		
C.4. Metering diagram (EB 70, Annex 11, C; EB 70 Annex 2 §193) <i>Check first if the MR includes a metering diagram showing all relevant monitoring points.</i> <i>Check further if this diagram reflects the actual situation and is in line with the registered PDD and with the requirements of the applied methodology.</i>	/PS/ /MR/ /IM01/ /IM02/	<i>Description:</i> Section C of the MR includes a metering diagram. The same has been verified against the SLDs obtained during the site visit and found to be accurate by the verification team. <i>Verifier's action:</i> By means of monitoring report, single line diagram and DCS besides site observations. <i>Conclusion:</i> Metering diagram is correctly mentioned.	OK	OK
C.5. Roles and Responsibilities (EB 70, Annex 11, C; EB 70 Annex 2 §193) <i>Check if all roles and positions of each person in the GHG data management process are clearly defined and implemented as stated in the monitoring plan. Please consider the complete data trail from raw data generation to submission of the final data.</i> <i>Identify, if relevant personnel w.r.t. monitoring has been exchanged?</i> <i>If so, have appropriate training measures been carried out.</i> <i>In case of changes, assure that the implemented monitoring procedures have not been affected.</i>	/PS/ /MR/ /IM01/ /IM02/	<i>Description:</i> All the roles and responsibilities of each person in the GHG data management process are clearly defined and implemented ^{/ORG/} . All the persons involved in the monitoring process are duly qualified and trained as verified during site visit ^{/TRG/} . <i>Verifier's action:</i> Verification team has verified during the site visit interviews that all the personnel dealing with the monitoring procedure are well qualified and trained. <i>Conclusion:</i> All the roles and responsibilities of each person involved in the GHG data management process are clearly defined and implemented.	OK	OK
C.6. Emergency procedures for the monitoring system	/PS/	<i>Description:</i> The relevant emergency procedures are in place and have been implemented as verified by the verification team	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
(EB 70 Annex 11, C; EB 70 Annex 2 §193) <i>Check, as appropriate, whether relevant emergency procedures for the monitoring system have been included in the MR and assess whether these procedures have been implemented, when required</i>	/MR/ /IM01/ /IM02/	during the site visit. <i>Verifier's action:</i> As verified during interview with the O&M team during the site visit. <i>Conclusion:</i> Appropriate emergency procedures are in place. The same have been implemented onsite by the O&M team.		
C.7. Data archive and data protection (EB 70 Annex 2 §56 b) Check whether all records of monitoring parameters are archived according to the monitoring plan. Assess further whether appropriate measures have been taken in order to avoid unintended or intended manipulation or loss of the measured data.	/LOG/ /PDD/ /IM01/ /IM02/	<i>Description:</i> All the records of the parameters being monitored as well as the related data are archived in accordance with the monitoring plan of the registered PDD. Furthermore, from the site visit interviews ^{/IM01/} , it was observed that appropriate measures have been taken to avoid unintended or intended manipulation of the measured data. <i>Verifier's action:</i> Verification team checked the log records of all the parameters to be monitored and found the same to be in place and according to the monitoring plan. It was also checked that all the daily energy generation records were maintained in separate log sheets. <i>Conclusion:</i> All the monitoring parameter records are archived electronically and as well as on paper according to the monitoring plan of the registered PDD. Furthermore, appropriate measures have been taken with regards to data protection so as to avoid manipulation or loss of the measured data.	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
D. Data and parameters				
D.1. Data and Parameters fixed ex ante		EFCO ₂ I & EFCaptive,y		
a) Compliance with registered PDD (EB 70 Annex 11; D1) Check whether the value applied is in compliance with the registered PDD.	/PDD/	<i>Description:</i> EFCO ₂ i (26.2) is taken from the IPCC data and EFCaptive,y (1.26 tCO ₂ eg/MWh) is same as mentioned in registered PDD. <i>Verifier's action:</i> Registered PDD and MR was checked and found to be correct. <i>Conclusion:</i> Ex-ante parameter is in compliance with registered PDD.	OK	OK
b) Compliance with the applied methodology (EB 70 Annex 11; D1) Check whether the value applied is in compliance with the applied methodology or any other tool.	/ACM/	<i>Description:</i> The value applied is matching with registered PDD and in line with methodology and tools mentioned there in. <i>Verifier's action:</i> Registered PDD and meth were checked and found to be satisfactory. <i>Conclusion:</i> Compliance with applied methodology is there.	OK	OK
D.2. Data and Parameters monitored				
D.2.1. EG_{GEN CPP}		Gross electricity generated by CPP		
a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236) Describe how the monitoring parameter was	/IM01/ /PDD/ /ACM4/	<i>Description:</i> The data is observed to be measured by an electric meter. This was confirmed by the site visit observation.	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/LOG/ /MR/	<p><i>Verifier's action:</i> It was observed during the site visit that data is measured continuously with a frequency of every 8 hrs. The data is maintained in the log book which is signed by the plant manager on a daily basis. This is consistent with the requirements in the registered PDD. Furthermore, it was also verified during the site visit that there has been no exchange of the measuring equipments.</p> <p><i>Conclusion:</i> The log book maintained by the plant manager has been submitted. The same have been verified and found to be acceptable.</p>		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/CAL/ /MM/ /IM01/ /LOG/ /PDD/	<p><i>Description:</i> The metering equipment used to measure gross electricity generated by CPP (EGEN CPP) has an accuracy of 0.5. The meter readings for the gross electricity generated are entered in the logbook and the same is verified by the plant manager. Furthermore, the meters are calibrated on an annual basis.</p> <p><i>Verifier's action:</i> The accuracy of the meter has been verified on site. The same has also been cross verified with the calibration certificates by the verification team. Documentary evidence viz the logbook as well as the calibration certificates have been verified by the verification team on site.</p> <p><i>Conclusion:</i> The accuracy of the meter used for monitoring the gross electricity generated is found to be controlled and calibrated in accordance with the MP of the registered PDD. It can therefore be concluded that the QA/QC procedures are in place and in accordance to the MP.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
c) Correctness (EB 70 Annex 3, §§ 233, 236) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/MR/ /LOG/	<input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment) <i>Description:</i> The gross electricity generated by CPP is measured by the electronic energy meter. The meter readings are measured continuously and recorded in the Log book. <i>Verifier's action:</i> The verification team has verified the values mentioned in the MR with those in the logbook maintained on site. <i>Conclusion:</i> The values mentioned in the MR are found to be correct and conservative.	OK	OK
D.2.2. EG_{Aux CPP}		Auxiliary electricity consumption by CPP		
a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/IM01/ /PDD/ /ACM4/ /LOG/ /MR/	<i>Description:</i> The data is observed to be measured by an electric meter provided at the feed to each auxiliary consumption source. This was confirmed by the site visit observation. However, the following CAR D1 has been raised: During the onsite review of the log sheets it was observed that the entry from 01/04/2010 to 30/04/2010 for auxiliary is not matching. Justification required on how the required parameters were monitored on this date i.e. for this month. <i>Verifier's action:</i> The measurement is continuous and transferred to a log book which is maintained by the shift engineer and approved by shift in charge as the daily report. This is consistent with the requirements mentioned in the registered PDD. The same has been verified by the verification	CAR D1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		team and further supplemented by interviews conducted on site. It was also confirmed during the site visit that there has been no exchange of the measuring equipments during the monitoring period. <i>Conclusion:</i> CAR D1 was raised.		
b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i> <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i>	/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/	<i>Description:</i> The metering equipments used to measure auxiliary electricity consumption by CPP have been mentioned to be of 1 accuracy class in the MR. The meter readings for the auxiliary consumption are entered in the logbook and the same is verified / signed by the plant manager daily. The meters are calibrated regularly i.e. on an annual basis. <i>Verifier's action</i> The accuracy of the meter has been verified on site. The same has also been cross checked with the calibration certificates by the verification team. The verification team has verified the documentary evidences i.e. the logbook as well as the calibration certificates during the site visit. <i>Conclusion:</i> The accuracy of the meter used for monitoring the auxiliary consumption is found to be controlled and calibrated in accordance with the MP. It can therefore be concluded that the QA/QC procedures are in place and in accordance to the MP.	OK	OK
c) Correctness (EB 70 Annex 3, §§ 233, 236) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the</i>	/MR/ /LOG/	<input type="checkbox"/> Correct <input checked="" type="checkbox"/> Not correct (initial assessment) <i>Description:</i> The auxiliary electricity consumed by CPP is measured through the electronic meters provided at the feeder to each auxiliary consumption source. The meter readings will be available continuously and then transferred to the Log book. The meter readings are then summed up to arrive at the total auxiliary consumption. Furthermore , pending CAR D1	CAR D1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>		<i>Verifier's action:</i> The verification team has verified the values mentioned in the MR with those in the logbook maintained on site. <i>Conclusion:</i> pending closure of CAR D1		
D.2.3. EG_y CPP		Net Electricity generation from CPP		
a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/IM01/ /PDD/ /ACM4/ /LOG/ /MR/	<i>Description:</i> This is a calculated value, arrived by the difference between the gross electricity generated by CPP and the auxiliary electricity consumed by CPP. Please refer to sections D.2.1 and D.2.2 above. <i>Verifier's action:</i> The procedure for arriving at the net electricity generated has been observed to be in place as per the registered PDD. Please refer to sections D.2.1 and D.2.2 above. <i>Conclusion:</i> Pending CAR D1	CAR D1	OK
b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most</i>	/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/	<i>Description:</i> Calculated based on measured data. Pl. Refer section D.2.3.a) <i>Verifier's action</i> The accuracy & QA/QC procedure of the calculations were checked and found to be satisfactory. Pl. Refer section D.2.3.a) <i>Conclusion:</i> Pl. Refer section D.2.3.a). Pending CAR D1	CAR D1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>				
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR/ /LOG/	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> Calculated based on measured data. Pl. Refer section D.2.3.a).</p> <p><i>Verifier's action:</i> The correctness of the calculations were checked and found to be satisfactory. Pl. Refer section D.2.3.a)</p> <p><i>Conclusion:</i> Pending CAR D1</p>	CAR D1	OK
D.2.4. E_{GEN}		Gross Electricity generation due to WHRB		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination</i></p>	/IM01/ /PDD/ /ACM4/ /LOG/ /MR/	<p><i>Description</i> This is a calculated value, arrived at by multiplying the “% contribution of enthalpy of steam from WHRB” to “Gross electricity generated by TG (E_{GEN})”.</p> <p><i>Verifier's action:</i> The procedure for arriving at the net electricity generated has been observed to be in place as per the registered PDD.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p><i>Conclusion:</i> The determination method is therefore found to be in accordance with the MP of the registered PDD and the applied methodology.</p>		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	<p>/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/</p>	<p><i>Description:</i> Calculated based on measured data. PI. Refer section D.2.4.a)</p> <p><i>Verifier's action</i> Calculated based on measured data. PI. Refer section D.2.4.a)</p> <p><i>Conclusion:</i> Calculated based on measured data. PI. Refer section D.2.4.a)</p>	OK	OK
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should</i></p>	<p>/MR/ /LOG/</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> Calculated based on measured data. PI. Refer section D.2.4.a)</p> <p><i>Verifier's action:</i> Calculated based on measured data. PI. Refer section D.2.4.a)</p> <p><i>Conclusion:</i> Calculated based on measured data. PI. Refer section D.2.4.a)</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>be given.</p> <p>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</p>				
D.2.5. E_{Aux}		Auxiliary consumption for WHRB electricity generation		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p>Describe how the monitoring parameter was measured / determined.</p> <p>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</p> <p>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</p>	<p>/XLS/ /PDD/ /MR/</p>	<p><i>Description:</i> This is a calculated value, arrived at by multiplying the “% contribution of enthalpy of steam from WHRB” to “Auxiliary electricity consumption by entire CPP (E_{AUX})”.</p> <p><i>Verifier’s action:</i> The procedure for arriving at the net electricity generated has been observed to be in place as per the registered PDD.</p> <p><i>Conclusion:</i> The determination method is therefore found to be in accordance with the MP of the registered PDD and the applied methodology.</p>	OK	OK
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</p>	<p>/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/</p>	<p><i>Description:</i> Calculated based on measured data. Pl. Refer section D.2.5.a)</p> <p><i>Verifier’s action:</i> Calculated based on measured data. Pl. Refer section D.2.5.a)</p> <p><i>Conclusion:</i> Calculated based on measured data. Pl. Refer section D.2.5.a)</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i>				
c) Correctness (EB 70 Annex 3, §§ 233, 236) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/MR/ /LOG/	<input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment) <i>Description:</i> Calculated based on measured data. Pl. Refer section D.2.5.a) <i>Verifier's action:</i> Calculated based on measured data. Pl. Refer section D.2.5.a) <i>Conclusion:</i> Calculated based on measured data. Pl. Refer section D.2.5.a)	OK	OK
D.2.6. EGy		Net electricity generated due to WHRB		
a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i>	/IM01/ /PDD/ /ACM4/ /LOG/ /MR/	<i>Description:</i> This is a calculated value, arrived at by the difference between the "Gross Electricity generation due to WHRB" and the "Auxiliary consumption for WHRB electricity generation". Please refer sections D.2.4 and D.2.5 above. <i>Verifier's action:</i> The procedure for arriving at the net electricity generated has been observed to be in place as per the registered PDD. <i>Conclusion:</i> The determination method is therefore found to be in accordance with the MP of the registered PDD and the	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.		applied methodology.		
b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i> <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i>	/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/	<i>Description:</i> Calculated based on measured data. PI. Refer section D.2.6.a) <i>Verifier's action</i> Calculated based on measured data. PI. Refer section D.2.6.a) <i>Conclusion:</i> Calculated based on measured data. PI. Refer section D.2.6.a)	OK	OK
c) Correctness (EB 70 Annex 3, §§ 233, 236) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details</i>	/MR/ /LOG/	<input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment) <i>Description:</i> Calculated based on measured data. PI. Refer section D.2.6.a) <i>Verifier's action:</i> Calculated based on measured data. PI. Refer section D.2.6.a) <i>Conclusion:</i> Calculated based on measured data. PI. Refer section D.2.6.a)	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>and descriptions of the CARs raised.</i>				
D.2.7. STEAM FLOW (F1,F2)		Steam flow at outlet of WHRB – 1 & WHRB - 2		
a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/IM01/ /PDD/ /ACM4/ /LOG/ /MR/	<i>Description:</i> The steam flow is found to be measured by the steam flow meters provided at the outlets of WHRBs 1 and 2. It has been found that transmitters feed the reading into the DCS on a continuous basis. The recording of this value has also been observed from the daily reports i.e. log book maintained by the shift engineer which is further approved by the shift in charge. The metering equipments are calibrated annually. <i>Verifier's action:</i> The procedure for measuring the steam flow has been observed to be in place as mentioned in the registered PDD by the verification team. <i>Conclusion:</i> The method of measurement is in line with the registered MP and the applied methodology. The same has been verified by the verification team on site.	OK	OK
b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i> <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the</i>	/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/	<i>Description:</i> The metering equipments used to measure the steam flow from the WHRBs are observed to have an accuracy of class 0.1. The same are calibrated on a regular basis i.e. annually. The steam flow quantity is measured by the steam flow meters and the readings are entered in the logbooks by the shift engineer. The same is then verified/ approved by the shift in charge. <i>Verifier's action</i> The verification team has verified the same during the site visit and further cross checked it with the calibration certificates. The verification team has verified the same by checking the log books during the same visit. Calibration certificates of the steam flow meters were also cross	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>monitoring equipment has been carried out in line with the latest EB guidance.</i>		checked. <i>Conclusion:</i> The accuracy of the meter used for monitoring this parameter is found to be controlled and calibrated in accordance with the MP. It can therefore be concluded that the QA/QC procedures are in place and in accordance to the MP.		
c) Correctness (EB 70 Annex 3, §§ 233, 236) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/MR/ /LOG/	<input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment) <i>Description:</i> The steam flow is found to be measured by the steam flow meters provided at the outlets of WHRBs 1 and 2. The transmitters feed the reading into the DCS on a continuous basis. The recording of this value is then transferred to the log book maintained by the shift engineer which is further approved by the shift in charge. The same is maintained as the daily report. The metering equipments are calibrated annually. <i>Verifier's action:</i> The verification team has verified the values mentioned in the MR with those in the logbook maintained on site. <i>Conclusion:</i> The values mentioned in the MR are found to be correct and conservative.	OK	OK
D.2.8. STEAM FLOW (F3)		Steam flow at outlet of AFBC		
a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination</i>	/IM01/ /PDD/ /ACM4/ /LOG/ /MR/	<i>Description:</i> The steam flow is found to be measured at the output of AFBC by the steam flow meter. The readings are available on the DCS continuously. The same are maintained as daily reports by the shift engineer which are further approved by the shift in charge. <i>Verifier's action:</i> The procedure for measuring the steam flow has been observed to be in place as mentioned in the registered	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p>PDD.</p> <p><i>Conclusion:</i> The method of measurement is in line with the registered MP and the applied methodology. The same has been verified by the verification team on site.</p>		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	<p>/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/</p>	<p><i>Description:</i> The steam flow meter is observed to have an accuracy of class 0.1. The same is calibrated on a regular basis i.e. annually. The steam flow quantity is measured by the steam flow meter and the readings are entered in the logbook by the shift engineer. The same is then verified/ approved by the shift in charge.</p> <p><i>Verifier's action</i> The verification team has verified the same during the site visit and further cross checked it with the calibration certificates. The verification team has verified the same by checking the log books during the same visit. Calibration certificates of the steam flow meter were also cross checked.</p> <p><i>Conclusion:</i> The accuracy of the meter used for monitoring this parameter is found to be controlled and calibrated in accordance with the MP. It can therefore be concluded that the QA/QC procedures are in place and in accordance to the MP.</p>	OK	OK
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the</i></p>	<p>/MR/ /LOG/</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> The steam flow is found to be measured by the steam flow meter provided at the outlet of AFBC. The readings are available on the DCS continuously. The same are maintained as daily reports by the shift engineer which are further approved by the shift in charge. Furthermore, the metering equipment is calibrated annually.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>		<p><i>Verifier's action:</i> The verification team has verified the values mentioned in the MR with those in the logbook maintained on site.</p> <p><i>Conclusion:</i> The values mentioned in the MR are found to be correct and conservative.</p>		
D.2.9. STEAM FLOW (F4)		Steam flow at inlet of TG		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /PDD/ /ACM4/ /LOG/ /MR/</p>	<p><i>Description:</i> The steam flow is found to be measured at the inlet of the TG by the steam flow meter. The readings are available on the DCS continuously. The same are maintained as daily reports by the shift engineer which are further approved by the shift in charge.</p> <p><i>Verifier's action:</i> The procedure for measuring the steam flow has been observed to be in place as mentioned in the registered PDD. The same has also been cross checked with the readings in the log book verified on site.</p> <p><i>Conclusion:</i> The method of measurement is in line with the registered MP and the applied methodology. The same has been verified by the verification team on site.</p>	OK	OK
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most</i></p>	<p>/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/</p>	<p><i>Description:</i> The steam flow meter is observed to have an accuracy of class 0.1. The same is calibrated on a regular basis i.e. annually. The steam flow quantity is measured by the steam flow meter and the readings are entered in the logbook by the shift engineer. The same is then verified/ approved by the shift in charge.</p> <p><i>Verifier's action</i> The verification team has verified the same during the site visit and further cross checked it with the</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>		<p>calibration certificates. The verification team has verified the same by checking the log books during the same visit. Calibration certificates of the steam flow meter were also cross checked.</p> <p><i>Conclusion:</i> The accuracy of the meter used for monitoring this parameter is found to be controlled and calibrated in accordance with the MP. It can therefore be concluded that the QA/QC procedures are in place and in accordance to the MP.</p>		
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR/ /LOG/	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> The steam flow is found to be measured by the steam flow meter provided at the inlet of the TG. The readings are available on the DCS continuously. The same are maintained as daily reports by the shift engineer which are further approved by the shift in charge. Furthermore, the metering equipment is calibrated annually.</p> <p><i>Verifier's action:</i> The verification team has verified the values mentioned in the MR with those in the logbook maintained on site.</p> <p><i>Conclusion:</i> The values mentioned in the MR are found to be correct and conservative.</p>	OK	OK
D.2.10. Steam Temp (T1,T2 &T3)		Temperature of steam at outlet of WHRB - 1, WHRB – 2 & AFBC		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged</i></p>	/IM01/ /PDD/ /ACM4/ /LOG/ /MR/	<p><i>Description:</i> The steam temperature is found to be measured at the output of WHRBs 1, 2, and AFBC by the temperature meters provided at their outputs. The readings are available on the DCS continuously. The recording of this value has also been observed from the daily reports approved by the shift in charge.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p><i>Verifier's action:</i> The procedure for measuring the steam temperature has been observed to be in place as mentioned in the registered PDD. The same has also been cross checked with the readings in the log book verified on site.</p> <p><i>Conclusion:</i> The method of measurement is in line with the registered MP and the applied methodology. The same has been verified by the verification team on site.</p>		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	<p>/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/</p>	<p><i>Description:</i> The metering equipments used to measure the steam temperature from the WHRBs and AFBC are observed to have an accuracy of class 0.1. The same are calibrated on a regular basis i.e. annually. The steam temperature is measured by temperature meters and the readings are entered in the logbook by the shift engineer. The same is verified by the shift in charge.</p> <p><i>Verifier's action</i> The verification team has verified the same during the site visit and further cross checked it with the calibration certificates. The verification team has verified the same by checking the log books during the same visit. Calibration certificates of the meters were also cross checked.</p> <p><i>Conclusion:</i> The accuracy of the meter used for monitoring this parameter is found to be controlled and calibrated in accordance with the MP. It can therefore be concluded that the QA/QC procedures are in place and in accordance to the MP.</p>	OK	OK
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative</i></p>	<p>/MR/ /LOG/</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> The temperature is found to be measured by the temperature meters. The readings are available on the DCS continuously. The same are maintained as daily reports by the shift engineer which are further approved by the shift in charge.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>		<p>Furthermore, the metering equipment is calibrated annually.</p> <p><i>Verifier's action:</i> The verification team has verified the values mentioned in the MR with those in the logbook maintained on site.</p> <p><i>Conclusion:</i> The values mentioned in the MR are found to be correct and conservative.</p>		
D.2.11. Steam Pressure (P1, P2)		Pressure of steam at outlet of WHRB – 1 & WHRB – 2		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /PDD/ /ACM4/ /LOG/ /MR/</p>	<p><i>Description:</i> The steam pressure is found to be measured at the outlets of WHRBs 1 and 2 by the pressure gauges. The readings are available on the DCS continuously. The recording of this value has also been observed from the daily reports approved by the shift in charge.</p> <p><i>Verifier's action:</i> The procedure for measuring the steam flow has been observed to be in place as mentioned in the registered PDD. The same has also been cross checked with the readings in the log book verified on site.</p> <p><i>Conclusion:</i> The method of measurement is in line with the registered MP and the applied methodology. The same has been verified by the verification team on site.</p>	OK	OK
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance</i></p>	<p>/CAL/ /MM/ /IM01/ /LOG/ /PDD/</p>	<p><i>Description:</i> The steam pressure gauges used for the WHRBs are observed to have an accuracy of class 0.1. The same are calibrated on a regular basis i.e. annually. The steam pressure is measured by the pressure gauges and the readings are entered in the logbook by the shift engineer. The same is then verified by the shift in charge.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/MR/	<p><i>Verifier's action</i> The verification team has verified the same during the site visit and further cross checked it with the calibration certificates. The verification team has verified the same by checking the log books during the same visit. calibration certificates were also cross checked.</p> <p><i>Conclusion:</i> The accuracy of the meter used for monitoring this parameter is found to be controlled and calibrated in accordance with the MP. It can therefore be concluded that the QA/QC procedures are in place and in accordance to the MP.</p>		
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR/ /LOG/	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> The pressure gauge reading is available continuously on the DCS. The same is then transferred and maintained in a Log book by the shift engineer.</p> <p><i>Verifier's action:</i> The verification team has verified the values mentioned in the MR with those in the logbook maintained on site.</p> <p><i>Conclusion:</i> The values mentioned in the MR are found to be correct and conservative.</p>	OK	OK
D.2.12. Steam Pressure (P3)		Pressure of steam at outlet of AFBC		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p>	/IM01/ /PDD/ /ACM4/ /LOG/ /MR/	<p><i>Description:</i> The steam pressure is found to be measured at the outlet of AFBC by the pressure gauges. The readings are available on the DCS continuously. The recording of this value has also been observed from the daily reports approved by the shift in charge.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p><i>Verifier's action:</i> The procedure for measuring the steam flow has been observed to be in place as mentioned in the registered PDD. The same has also been cross checked with the readings in the log book verified on site.</p> <p><i>Conclusion:</i> The method of measurement is in line with the registered MP and the applied methodology. The same has been verified by the verification team on site.</p>		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	<p>/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/</p>	<p><i>Description:</i> The steam pressure gauges used for the AFBC is observed to have an accuracy of class 0.1. The same are calibrated on a regular basis i.e. annually. The steam pressure is measured by the pressure gauges and the readings are entered in the logbook by the shift engineer. The same is then verified by the shift in charge.</p> <p><i>Verifier's action</i> The verification team has verified the same by checking the log book during the site visit. Calibration certificates of the pressure gauges were also cross checked. QA/QC procedures were also checked by interviewing the CDM coordinator who is archiving the data.</p> <p><i>Conclusion:</i> The accuracy of the pressure gauge used for monitoring the pressure is found to be controlled and calibrated in accordance with the MP. It can therefore be concluded that the QA/QC procedures are in place and in accordance to the MP.</p>	OK	OK
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative</i></p>	<p>/MR/ /LOG/</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> The pressure gauge reading is available continuously on the DCS. The same is then transferred and maintained in a Log book by the shift engineer.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>manner.</p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>		<p><i>Verifier's action:</i> The verification team has verified the values mentioned in the MR with those in the logbook maintained on site.</p> <p><i>Conclusion:</i> The values mentioned in the MR are found to be correct and appropriate.</p>		
D.2.13. EG_{IMPORT}		Gross Electricity imported from Grid		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /MR/ /JMR/	<p><i>Description:</i> The data is observed to be measured by an electric meter provided at the substation where the grid interface is established. This was confirmed during the site visit.</p> <p><i>Verifier's action:</i> The data measurement is found to be continuous. Monthly joint meter readings (JMR) for the electricity imported from the grid are available at the plant and the same were cross checked during the site visit. Furthermore, no exchange of equipments has been observed during the morning period.</p> <p><i>Conclusion:</i> The method for measurement is in line with the registered Monitoring plan and the applied methodology.</p>	OK	OK
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance</i></p>	/MR/ /IM01/	<p><i>Description:</i> The electronic meter provided at the grid interface is of class 0.2 accuracy. The same are calibrated by the Grid authorities at regular intervals as per the prevailing laws of the grid. The electric meter provided to measure the gross electricity imported is entirely under the control of the Grid authorities. The meter is sealed and calibrated at regular intervals.</p>	CAR D2	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>		<p>CAR D2 is raised as import meter is not calibrated yearly.</p> <p><i>Verifier's action</i> As the calibration of the above mentioned meter is entirely under the control of the Grid authorities, the calibration documents are not available for the same. Therefore as per VVS §§ 237 an error adjustment has been applied to the measured value. The same has been verified by the verification team and found to be acceptable. It was observed by the verification team during the site visit that the meter is sealed by the authorities and that the PP has no control over it.</p> <p><i>Conclusion:</i> CAR D2 is raised</p>		
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR/ /LOG/	<p><input checked="" type="checkbox"/> Correct <input checked="" type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> Pl. Refer Section D.2.13. a) and b)</p> <p>Furthermore CL D3 is raised for JMR data.</p> <p><i>Verifier's action:</i> Pl. Refer Section D.2.13. a) and b)</p> <p><i>Conclusion:</i> Pl. Refer Section D.2.13. a) and b)</p>	CL D3	OK
D.2.14. EG_{EXPORT}		Gross Electricity exported to the Grid		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was</i></p>	/IM01/ /PDD/ /ACM4/ /JMR/	<p><i>Description:</i> The data is observed to be measured by an electric meter provided at the substation where the interface with the grid was established. This was confirmed during the site visit.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/MR/	<p><i>Verifier's action:</i> The data measurement is found to be continuous. Monthly joint meter readings (JMR) for the electricity imported from the grid are available at the plant and the same were cross checked during the site visit. Furthermore, no exchange of equipments has been observed during the morning period.</p> <p><i>Conclusion:</i> The method for determination is found to be in line with that specified in the MR and the applied methodology.</p>		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/CAL/ /MM/ /IM01/ /LOG/ /PDD/ /MR/	<p><i>Description:</i> The electronic meter provided at the grid interface is of class 0.2 accuracy. The same are calibrated by the Grid authorities at regular intervals as per the prevailing laws of the grid. The electric meter provided to measure the gross electricity imported is entirely under the control of the Grid authorities. The meter is sealed by grid authorities.</p> <p>CAR D4 was raised as the calibration is delayed for export meter.</p> <p><i>Verifier's action</i> As the calibration of the above mentioned meter is entirely under the control of the Grid authorities, the calibration documents are not available for the same. The same has been verified by the verification team on site and by cross checking with the JMRs and found to be acceptable. It was observed by the verification team during the site visit that the meter is sealed by the authorities and that the PP has no control over it.</p> <p><i>Conclusion:</i> CAR D4 was raised</p>	CAR D4	OK
c) Correctness	/MR/ /JMR/	<p><input checked="" type="checkbox"/> Correct <input checked="" type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> Pl. Refer Section D.2.14. a) and b)</p>	CL-D3	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/IM01/	<p>Furthermore CL D3 is raised for JMR data.</p> <p><i>Verifier's action:</i> Pl. Refer Section D.2.14. a) and b)</p> <p><i>Conclusion:</i> Pl. Refer Section D.2.14. a) and b)</p>		
D.3. Sampling				

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>a) Implementation of sampling plan (EB70 Annex 11; D3)</p> <p><i>Check whether the PP has applied a sampling approach to determine the monitored values (as per section D.2 above).</i></p> <p><i>If this is the case, please provide an assessment whether the PPs have correctly and sufficiently described the implemented sampling plan including</i></p> <p><i>a) Description of the implemented sampling design</i></p> <p><i>b) Collected data</i></p> <p><i>c) Analysis of collected data</i></p> <p><i>d) Demonstration on whether the required confidence/precision has been met.</i></p>	/MR/	<p><input checked="" type="checkbox"/> No sampling approach has been used by the PP to determine the monitored parameters</p> <p>OR.</p> <p><input type="checkbox"/> A sampling approach has been taken for the following monitored parameter:</p> <p>Parameter: Name_of Parameter</p> <p>Description:</p> <p>Verifier's action:</p> <p>Conclusion:</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
b) Sampling during verification <i>In case the VT has applied a sampling approach in the course of the verification the approach shall be described for each parameter.</i>	/SV/	<input checked="" type="checkbox"/> No sampling approach has been used by the VT to verify the monitored parameters OR. <input type="checkbox"/> A sampling approach has been applied by the VT for the following monitored parameter: Parameter: Name_of Parameter Description: Conclusion:	OK	OK
E. Calculation of Emission reductions				
E.1. Traceability (EB 70 Annex 3, §§ 212, 214) <i>Assess if the calculation is fully traceable. In case of complex calculations an Excel calculation spreadsheet shall be used. All applied formulae must be visible.</i>	/XLS/	Description: CAR E1 is raised The spreadsheet is missing. Verifier's action: Submission of ER sheet awaited. Conclusion: CAR E1 is raised	CAR E1	OK
E.2. Parameter consistency (EB 70 Annex 3, § 214) <i>Assess whether all internal and external parameters and data used for calculation are applied consistently in the monitoring report and the calculation</i>	/XLS/	Description: Please refer CAR E1 above Verifier's action: please refer section E.1 above	CAR E1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>spreadsheet?</p> <p>Consider only the correct data exchange between the monitoring report and the calculation spreadsheet (if any). Further ensure the consistency of notations for all parameters in the PDD, MR, calculation spreadsheet.</p>		Conclusion: pending CAR E1		
<p>E.3. Correctness of calculation (EB 70 Annex 3, §§ 235-236)</p> <p>Check if the applied formulae and methods for calculating baseline emissions, project emissions and leakage are in accordance with the monitoring plan and / or the approved methodology.</p> <p>Assess whether the provided calculations are complete and reflect all requirements of the monitoring plan.</p> <p>Check especially that no standard or old values have been used for calculation where calculations based on up-to-date data is required.</p>	/XLS/	<p>Description: Please refer CAR E1 above</p> <p>Verifier's action: please refer section E.1 above</p> <p>Conclusion: pending CAR E1</p>	CAR E1	OK
<p>E.4. Emission reductions table (EB 70, Annex 11, E.4)</p> <p>Check if the MR includes a summary table of the emission reductions calculation specifying separately</p> <ul style="list-style-type: none"> - Total baseline emissions 	/MR/ /XLS/	<p><input checked="" type="checkbox"/> The MR includes in section E.4 a summary table of the emission reductions calculation.</p> <p><input checked="" type="checkbox"/> The summary table specified the total baseline, project and leakage emissions as well as the total emission reductions separately.</p> <p><input type="checkbox"/> The values as specified in the ER summary table are</p>	CAR D1 CAR E1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<ul style="list-style-type: none"> - Total project emissions: - Total leakage - Total emission reductions. <p>Assess whether the values are correct or need to be revised as a consequence of issues identified above.</p>		<p>correct; no issues have been identified during the verification which require changes in the ER calculation.</p> <p><input checked="" type="checkbox"/> During the verification issues with impact on the ER calculation have been identified. Thus subject to the closure of above listed findings the summary table in E.4 needs to be revised.</p> <p>In this context the following additional findings have been identified:</p> <p>Pending closure of CAR D1 and CAR E1 above.</p>		
<p>E.5. Comparison with ex-ante determined emission reductions (EB 70, Annex 11, E.5; E.6)</p> <p>Check if the MR includes a comparison of actual values of the monitoring period with the estimations in the registered PDD.</p> <p>Check further whether in case of an increase an appropriate explanation is included in the MR.</p> <p>Assess in case of a significant increase whether this is due to technical or organisational changes within or outside the control of the PP and – if this is case – whether the PRC have been considered appropriately.</p>	/XLS/ /MR/ /PDD/	<p><i>Description:</i> Comparison between estimated and actual emission reduction has been done in the Monitoring Report. The comparison is appropriate and calculated for the period under monitoring.</p> <p><i>Verifier's action:</i> The required comparison is mentioned in the MR as checked by the verification team.</p> <p><i>Conclusion:</i> comparison is correctly done.</p>	OK	OK
<p>E.6. ER during the 1st commitment period and the period from 1 January 2013 onwards</p>	/MR/	<p><input type="checkbox"/> The MR in section E.7 includes a summary table of the ER breakdown</p> <p>a) ER up to 2012-12-31 and</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 70, Annex 11, E.7)</p> <p>Check if the MR includes in chapter E.7 a breakdown of the actual ER into</p> <p>a) ER up to 2012-12-31 and</p> <p>b) ER from 2013-01-01 onwards</p> <p>The ERs for each period should be determined as per the actual generation. In cases where this is not possible or a cap has been applied a proportional (time related) approach should be chosen.</p>		<p>b) ER from 2013-01-01 onwards</p> <p><input checked="" type="checkbox"/> The breakdown of the ERs during the first commitment period and from 2013-01-01 onwards is as follows:</p> <p><input checked="" type="checkbox"/> The ER have completely been generated during the first commitment period</p> <p><input type="checkbox"/> The ERs have completely been generated from 2013-01-01 onwards,</p> <p><input type="checkbox"/> The ERs have partly been generated during the first commitment period and partly from 2013-01-01 onwards.</p> <p><input type="checkbox"/> The breakdown of the ERs is correct, considering the applicable guidance.</p> <p>In this context the following additional findings have been identified:</p> <p>N/A</p>		

ANNEX 2: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL

TÜV NORD Certification		
<p align="center">Statement of Competence Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program</p>		
<p align="center">Mr. Pankaj Mohan</p>		
SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2014-07-11
VCS	Senior Assessor (Validation, Verification)	2014-07-11
<p>Authorization status for technical areas within sectoral scopes:</p>		
CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal energy generation	
1.2	Renewable energy	
2.1	Electricity distribution	
3.1	Energy demand	
4.1	Cement sector*	
4.5	Waste Heat Recovery*	
<p>*valid for validation/verification assessments contracted prior to 2012-03-17.</p>		
<p>150 – Rev. 3, Date: 2011-10-28</p>		
<p>150_S01-F003_2011-10-28_rev3.doc</p>		

TÜV NORD Certification		
<p align="center">Statement of Competence Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program</p>		
<p align="center">Mr. Prabhat Kumar</p>		
SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2015-01-17
VCS	Lead Assessor	2015-01-17
<p>Authorization status for technical areas within sectoral scopes:</p>		
CODE	TECHNICAL AREA	
1.2	Renewable Energies	
7.1	Transport	
13.1	Waste Handling and Disposal	
<p>284 – Rev. 3, Date: 2012-02-08</p>		
<p>284_S01-F003_2012-02-08_rev3.doc</p>		

TÜV NORD Certification		
<p align="center">Statement of Competence Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program</p>		
<p align="center">Mr. Vineet Kumar</p>		
SCHEME	STATUS	VALID UNTIL
CDM	Assessor (Validation, Verification)	2015-01-19
VCS	Assessor	2015-01-19
<p>234 – Rev. 0, Date: 2012-01-20</p>		
<p>234_S01-F003_2011-01-20_rev0 - Vineet Kumar .doc</p>		

**Statement of Competence**

Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Rainer Winter

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2013-07-03
JI	Senior Assessor Technical Reviewer	2013-07-03
VCS	Senior Assessor Technical Reviewer	2013-07-03

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal Energy Generation	
1.2	Renewable Energies	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
4.1	Cement Sector	
4.3	Iron and Steel	
4.5	Waste Heat Recovery	
5.1	Chemical Process Industries	
9.1	Metal Production	
11.1	Chemical Process Industries	
11.2	GHG Capture and Destruction	
12.1	Chemical Process Industries	
13.1	Waste Handling and Disposal	13.1.1 Waste Management

003 – Rev. 5, Date: 2011-08-01

003_S01-F003_2011-08-01_rev5

S01-F003 rev5 / 2010-04-19

**Statement of Competence**

Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Kunal Rami

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2016-02-27
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2016-02-27

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable Energies	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
6.1	Construction	
13.1	Waste Handling and Disposal	13.1.1 Waste Management 13.1.2 Waste Water Management

224 – Rev. 4, Date: 2013-02-28

224_S01-VA060-F20_2013-02-28_rev4.doc

S01-VA060-F20 rev3 / 2012-10-25