



VALIDATION OPINION
of
the revision of monitoring plan
of the registered
CDM Project Activity

**Waste Heat Recovery based
captive power generation by
SKS Ispat Ltd**
(UNFCCC Reference No: 0674)

in
India

REPORT NO. 01 997 9105067895
VERSION ~~0302-1~~, 201~~24~~-0~~42~~-2~~52~~

TÜV Rheinland (China) Ltd.

I. Project data:

Project title:	Waste Heat Recovery based captive power generation by SKS Ispat Ltd
Registration date:	17/12/2006
UNFCCC Reference No.	0674
Methodology:	ACM0004, Version 02
GHG reducing measure/technology:	Displacement of electricity (from grid) through generation of power from waste heat.

Party	Project participant(s)	Party considered a project participant
India	SKS Ispat & Power Limited	No

II. Verification data:

Contracting Entity:	SKS Ispat & Power Limited
----------------------------	---------------------------

Verification team

Role	Full name	Appointed for Sectoral Scopes	Affiliation
Team Leader	Mr. Raj Kumar Deka	1, 2, 3	TÜV Rheinland (India) Pvt. Ltd.
Team Member/ Technical Expert	Mr. Shivraj Sharma Mr. Lakshman Prasad (Technical Expert)	1, 3, 13 4	TÜV Rheinland (India) Pvt. Ltd. TÜV Rheinland (India) Pvt. Ltd.
Technical Reviewer	Mr. Walter Tang	1, 2, 3, 4, 13	TÜV Rheinland (China) Pvt. Ltd.

III. Validation report data:

Report No.: 01 997 9105067895	Current revision No.: 032.1	Date of current revision: 2012-042-252	Date of first issue: 2011-02-13
---	---------------------------------------	--	---

Distribution:

☒ No distribution without permission from the Client or responsible organizational unit
 ☐ Unrestricted distribution

Final approval: <input type="checkbox"/>	Released on: Date: 20120X-04XX-27XX By: Mr. Praveen Urs	Designated Operational Entity (DOE): TÜV Rheinland (China) Ltd. Unit 707, AVIC Building, No.10B, Central Road, East 3rd Ring Road, Chaoyang District, Beijing, China 100022 Tel.: +86 10 6566 6660, Fax: +86 10 6566 6667 E-mail: ghg-doe@bj.chn.tuv.com
---	---	---

Validation opinion — summary

Project participant of the registered CDM Project “Waste Heat Recovery based captive power generation by SKS Ispat Ltd” has identified the need of revising of the monitoring plan to improve accuracy and completeness of the monitoring information (Cp para 57 of CDM M&P and Procedures for Revising Monitoring Plans in Accordance with Paragraph 57 of the Modalities and Procedures for the CDM, Version-2, EB-49, Annex-28) and requested DOE to validate the revision of the monitoring plan.

The DOE (TÜV Rheinland (China) Ltd.) has carried out a validation of the revised monitoring plan in accordance with the

- “Procedures for revising monitoring plans in accordance with paragraph 57 of the Modalities and procedures for CDM” (§ 9 of Annex 28 of EB 49)

This revision enhances the level of accuracy and completeness of the monitoring plan.

Validation opinion in accordance with paragraph 9 of annex 28 of EB 49

(a) Level of accuracy and completeness

- ☒ TUV Rheinland herewith confirms that the proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced.

Background

The project participant has initiated the revision of monitoring plan further to FAR 05 and FAR 08 raised in last verification report (Report number CDM.VER0331MP2, dated 04/07/2011). FAR 05 was raised to in order to make the monitoring plan inline due to the installation of a new CFBC boiler and TG-3 and sharing of common steam header which eventually lead to steam apportioning. FAR 08 was raised to account the steam loss from the WHRBs to achieve the most conservative approach for EGy calculation. Although FAR 08 refers to the correction of formula use to prorate power generation to account the steam loss form WHRBs, the formula number 4 and 5 of the revised monitoring plan has not undergone any revision. It was identified that the approach for calculation pro-rata factor "F" was incorrect in the existing revised monitoring plan (RMP version 1.2, dated 26/12/2009). The present revised monitoring plan (version 1.1, dated 19/12/2011) correctly address both FAR 05 and FAR 08 rose in last verification report. Refer the below section for details of revisions and validator's assessment.

There is no deviation found in the implementation status of the project activity as described in the registered PDD, as verified during site visit and neither the operation of project activity is altered as defined in the registered PDD. In Annex 4 (Data Adjustment) of the registered PDD the steam form coal fired boiler/boilers were clearly anticipated and state that the power generation from WHRB would be based on pro-rata basis on the steam supplied by WHRB to 25 MW turbine (TG-1). Hence the validation team confirms that the installation of CFBC and TG-3 is not considered a potential deviation of the implementation and operational of the projects activity and does not considered under change in project activity design.

The assessment of each proposed changes in the revised monitoring plan in comparison with the registered PDD are presented in the tabulated form as below:

Table (a).1

Elements of Comparison	Points in registered MP changes undergone	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
Changes in "section D.2.1"			
Section D.2.1	Project emissions associated to the project activity is zero. Therefore, this section is Not Applicable as described below-	Project emissions associated to the project activity is zero. Therefore, this section is Not Applicable as described below- Project emission for the project activity has	There is-a <u>are presently 4 no of</u> 750 KVA <u>(each)</u> DGs <u>(Diesel Generators)</u> installed for the WHR power plant <u>and the AFBC and CFBC boilers (Including TG 2 and TG 3)</u> . The project emission form the DGs was already considered in section D.2.1.2 of the monitoring

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
		been considered only through the consumption of diesel in the DG set associated with the project activity which can be also found in the section D.2.1.3. Emission associated to the AFBC and CFBC boilers is zero.	<p>plan. Hence the contradictory statement "Project emissionsdescribed below-" is rightly removed.</p> <p>Also the statement "Emission associated to the AFBC and CFBC boilers is zero" is deemed correct as any power consumption in the WHRB TG (TG-1) by the steam from AFBC and CFBC is deducted from the emission reduction calculation.</p> <p>The correction will not reduce the completeness and the accuracy of the monitoring plan.</p>
Section D.2.1	As the steam from AFBC boiler is not considered in the baseline emission estimation, the same (AFBC Boiler) is not included in the project emissions from AFBC Boilers as well.	As the steam from AFBC and CFBC boilers is not considered in the baseline emission estimation, accounted in the calculation of baseline emissions, the same (steam from AFBC and CFBC Boilers) is not included in the project emissions from AFBC Boiler for calculation of project emissions as well.	<p>The revision improve the correctness of the statement as a new CFBC boiler and TG – 3 was connected to the steam header, which is interconnected to the WHRB and TG – 1 steam header. The monitoring parameters in section D.2.1.3 and the baseline emission calculation in section D.2.1.4 rightly consider the new CFBC boiler and TG – 3.</p> <p>The correction will not reduce the completeness and the accuracy of the monitoring plan.</p>
Section D.2.1	Process flow diagram showing four WHR boilers, one AFBC boilers, TG – 1 and TG 2.	Process flow diagram showing four WHR boilers, one AFBC boilers, one CFBC boilers, TG – 1, TG - 2 and TG 3.	<p>The revised process flow diagram includes the CFBC and TG – 3. Also the steam line for AFBC and TG -2 is corrected as per the actual scenario.</p> <p>The revision in the diagram is correctly done increasing the correctness of the representation of the system.</p> <p>The correction will not reduce the completeness and the accuracy of the monitoring plan.</p>
Changes in "section D.2.1.1."			
Qi	Diesel is used on dip-stick measurement of the diesel purchase records.	Diesel is used on dip-stick/oil level indicator measurement of the diesel purchase records.	The revision is deemed to be correct as it was verified during site visit. Both the methods are equally comparable and capable of measuring the necessary

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
			parameter. The correction will not reduce the completeness and the accuracy of the monitoring plan.
NCV _i	--	This is a new monitoring parameter.	Monitoring of Net Calorific Value of Diesel is in compliance with the methodology requirement. The correction will increase the completeness and the accuracy of the monitoring plan.
EF _i	--	This is a new monitoring parameter.	Monitoring of Emission Factor of the diesel is in compliance with the methodology requirement. The correction will increase the completeness and the accuracy of the monitoring plan.
Changes in "section D.2.1.2."			
Equation for PE _y	$PE_y = \sum_i Q_i \times \rho \times NCV_i \times EF_i \times 44/12 \times OXID_i$	$PE_y = \sum_i Q_i \times \rho \times NCV_i \times EF_i \times 44/12 \times OXID_i$	The value of EF _i was as per section D.2.1 of the registered PDD is in tC/TJ. However as per the IPCC (http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf) the value of the parameter "EF _i " is in kg CO ₂ /TJ (mentioned as tonne CO ₂ /TJ in revised monitoring plan). Hence the revision is deemed to be correct. The correction will increase the completeness and the accuracy of the monitoring plan.
Description of NCV _i	Net calorific value of the diesel used (43 TJ/Gg, IPCC Default value, fixed ex-ante, http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf)	Net calorific value of the diesel used (43 TJ/TonneGg, IPCC Default value, fixed ex-ante, http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf)	The description of NCV _i is correctly revised as NCV _i is a monitoring parameter. The correcting in unit of NCV _i is confirmed through unit balance for equation no (1) and deemed correct. The correction will not reduce the completeness and the accuracy of the monitoring plan.
Description of EF _i	Emission Factor of the diesel used (74.1 tonne/TJ, IPCC Default value, fixed ex-ante, http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf)	Emission Factor of the diesel used (74.1 CO₂ tonne/TJ, IPCC Default value, fixed ex-ante, http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf)	The description of EF _i is correctly revised as EF _i is a monitoring parameter. The correction will not reduce the completeness and the accuracy of the monitoring plan.

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
Changes in “section D.2.1.3.”			
EG _{GEN} (Recording Frequency)	Continuously	Measuring Frequency: Continuously Recording: Daily Reported: monthly	The revision enhances the transparency within the measuring frequency, recording frequency and reporting frequency. The correction will not reduce the completeness and the accuracy of the monitoring plan.
EG _{AUX} (Recording Frequency)	Continuously	Measuring Frequency: Continuously Recording: Daily Reported: monthly	Same as above
EG _y (Recording Frequency)	daily	Recording: daily Reported: monthly	Same as above
Q _{WHRB1} (Recording Frequency)	continuously	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
Q _{WHRB2} (Recording Frequency)	continuously	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
Q _{WHRB3} (Recording Frequency)	continuously	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
Q _{WHRB4} (Recording Frequency)	continuously	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
Q _{TG1} (Recording Frequency)	continuously	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
Q _{AFBC} (Data variable)	Steam Quantity supplied by the coal based boiler	Steam Quantity supplied by the coal based AFBC boiler	The revision enhances the clarity and transparency of monitoring plan as presently there are 2 numbers of coal fired boilers (AFBC and CFBC) are installed at the project site. The correction will increase the completeness and the accuracy of the monitoring plan.
Q _{AFBC} (Recording Frequency)	continuously	Measuring Frequency: continuously Recording: daily Reported: monthly	The revision enhances the transparency within the measuring frequency, recording frequency and reporting frequency. The correction will not reduce the completeness and the accuracy of the monitoring plan.
Q _{AFBC}	Steam flow meters are	Steam flow meters are	The revision enhances the clarity

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
(Comment)	installed at outlet of the coal fired boiler. Meter Reading is recorded on daily basis.	installed at outlet of the coal fired AFBC boiler. Meter r Reading is recorded on daily basis.	and transparency of monitoring plan as presently there are 2 numbers of coal fired boilers (AFBC and CFBC) are installed at the project site. The correction will increase the completeness and the accuracy of the monitoring plan.
Q _{TG2} (Recording Frequency)	continuously	Measuring Frequency: continuously Recording: daily Reported: monthly	The revision enhances the transparency within the measuring frequency, recording frequency and reporting frequency. The correction will not reduce the completeness and the accuracy of the monitoring plan.
Q _{Steam loss} (Recording Frequency)	daily	Reporting: daily Reported: monthly	Same as above
T _{WHRB1} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
T _{WHRB2} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
T _{WHRB3} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
T _{WHRB4} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
T _{TG1} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
T _{Feed Water} el _{WHRB1} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
T _{Feed Water} WHRB2 (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
T _{Feed Water} WHRB3 (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
T _{Feed Water} WHRB4 (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
P _{WHRB1} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
P _{WHRB2} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
P _{WHRB3} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
P _{WHRB4} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
P _{TG1} (Recording Frequency)	daily	Measuring Frequency: continuously Recording: daily Reported: monthly	Same as above
Enthalpy _{WHRB1} (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Enthalpy _{WHRB2} (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Enthalpy _{WHRB3} (Recording Frequency)	daily	Recorded: daily Reporting: monthly	Same as above
Enthalpy _{WHRB4} (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Enthalpy _{Steam Loss} (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Enthalpy _{TG1} (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Enthalpy Feed Water _{WHRB1} (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Enthalpy Feed Water _{WHRB2} (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Enthalpy Feed Water _{WHRB3}	daily	Recording: daily Reporting: monthly	Same as above

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
(Recording Frequency)			
Enthalpy Feed Water WHRB4 (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Net Enthalpy WHRB 1 (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Net Enthalpy WHRB 2 (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Net Enthalpy WHRB3 (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Net Enthalpy WHRB4 (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
$\sum ST_{WHRB\ i}$ (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
ST_{TG1} (Recording Frequency)	daily	Recording: daily Reporting: monthly	Same as above
Q_{CFBC} (Steam Quantity supplied by the coal based CFBC boiler)	--	This is a new monitoring parameter.	<p>This is a new monitoring parameter introduce for correct calculation of steam loss and hence the "F" (Pro-rata Factor) after installation of CFBC boiler. The steam line from CFBC boiler is connected to the common header of the project activity as verified during the site visit, hence monitoring of this parameter is deemed correct.</p> <p>The correction will not reduce the completeness and the accuracy of the monitoring plan.</p>
Q_{TG3} (Steam Quantity at TG3 inlet)	--	This is a new monitoring parameter.	<p>This is a new monitoring parameter introduce for correct calculation of steam loss and hence the "F" (Pro-rata Factor) after installation of TG - 3. The steam line to the TG - 3 is connected from the common header of the project activity as verified during the site visit, hence monitoring of this parameter is deemed correct.</p> <p>The correction will not reduce the</p>

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
			completeness and the accuracy of the monitoring plan.
Changes in “section D.2.1.4.”			
Section D.2.1.4.	--	Now, along with the coal fired AFBC boiler there is another coal fired CFBC boiler, the steam from which can also be used in TG1 in the same manner. Hence, in this scenario as well, power generation from WHRBs would be done on pro-rata basis on the steam supplied by WHRBs to TG1.	One new CFBC boiler and TG – 3 was installed in the project site and the steam lines from the CFBC boiler and TG – 3 are connected to the common header of the project activity. Hence the statement in the revised monitoring plan enhances the transparency of the system and correct calculation of the baseline emission.
Section D.2.1.4.	Value of F is taken as 1, when the total quantity of steam at TG1 inlet is less or equal to the steam supplied by the WHRBs to the common steam header. It means that steam from only WHRBs has been used to generate power in TG1 and surplus steam generated from WHRBs has been supplied to TG2. Else, when the total quantity of steam at TG1 inlet is more than the total steam supplied by the WHRBs to the common steam header, F would be calculated as per formula (4) mentioned below. If $Q_{TG1} > Q_{WHRB}$, it means that all the steam produced by WHRBs has been used to generate power in TG1 (project activity) and additional steam from the coal fired AFBC boiler has also been used to generate power in TG1.	Value of F is taken as 1, when the total quantity of steam at TG1 inlet is less or equal to the steam supplied by the WHRBs to the common steam header. It means that steam from only WHRBs has been used to generate power in TG1 and surplus steam generated from WHRBs has been supplied to TG2. Else, when the total quantity of steam at TG1 inlet is more than the total steam supplied by the WHRBs to the common steam header, F would be calculated as per formula (4) mentioned below. If $Q_{TG1} > Q_{WHRB}$, it means that all the steam produced by WHRBs has been used to generate power in TG1 (project activity) and additional steam from the coal fired AFBC boiler has also been used to generate power in TG1. The value of F will be calculated as per formula (4) mentioned below. Here F is calculated as the ratio	The revision in the monitoring plan is done in accordance with the FAR 08 of the verification report dated 04/07/2011 for the monitoring period 01/07/2007 to 31/12/2009. FAR 08 was raised against CAR 07. According to present revised monitoring plan, dated 26/12/2009 “Value of F is taken as 1, when the total quantity of steam at TG1 inlet (Q_{TG1}) is less than or equal to the steam supplied by the WHRBs to the common steam header.” Hence according to the present revised monitoring plan, dated 26/12/2009 the value of “F” will not be calculated when the condition $TG-1 \leq Q_{WHRB}$ (i.e. $Q_{TG1} \leq Q_{WHRB}$) is satisfied, However this approach does not take into account the steam loss from the WHRB. The FAR 08 is raised to revise the monitoring plan to consider the steam loss from the WHRB. PP has revised the monitoring plan to calculate the value of “F” for entire monitoring period irrespective of the condition “ $TG-1 \leq Q_{WHRB}$ ” (i.e. $Q_{TG1} \leq Q_{WHRB}$), which will account all the steam loss from the WHRB. The revision ensures the conservative approach of the emission reduction calculation. The correction will increase the completeness and the accuracy of

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
		between “the total energy of steam supplied by WHRBs (from which energy in Steam Loss is deducted)” to the total energy of steam at TG1 inlet. In all the events, the value of F will either be less than 1 or restricted to 1. By restricting the value of F to 1 it is ensured that emission reductions are not accounted for the surplus steam energy from WHRBs which is supplied to TG2 or TG3.	the monitoring plan ensuring conservativeness.
Section D.2.1.4.	Q Steam Loss = $(Q_{WHRB1} + Q_{WHRB2} + Q_{WHRB3} + Q_{WHRB4} + Q_{AFBC}) - (Q_{TG1} + Q_{TG2})$	Q Steam Loss = $(Q_{WHRB1} + Q_{WHRB2} + Q_{WHRB3} + Q_{WHRB4} + Q_{AFBC} + Q_{CFBC}) - (Q_{TG1} + Q_{TG2} + Q_{TG3})$	The formula for the calculation of Q Steam Loss is correctly revised to take account of the steam from the newly installed CFBC boiler and steam to TG – 3. The correction will increase the completeness and the accuracy of the monitoring plan.
Section D.2.1.4.	<i>The revised monitoring plan has been devised taking guidance from ACM0012 Ver 3.1 and it meets the requirements of Method 2 as mentioned on page 24 of the methodology ACM0012, Ver 3.1.</i>	The revised monitoring plan has been devised taking guidance from ACM0012 Ver 4.0.03-1 and it meets the requirements of “ Alternative Method ” Method 2 under section 3.1.2 as mentioned on page 294 of the methodology ACM0012, Ver 4.0.03-1 .	The revision ensures the correct reference of the equation in ACM0012, version 4.0.0 as the pro-rata factor calculation is based on steam measurement. The correction will increase the completeness and the accuracy of the monitoring plan.
Section D.2.2.2.	--	The formulae used to calculate project emissions have been included in the section D.2.1.2.	The revision increases the transparency on the monitoring plan.
Section D.3	Data (Indicate table and ID number e.g. 3.-1.; 3.2.)	The ID number of the monitoring parameter has undergone change	The ID numbers are updated as per the revision in section D.2.1.1 and D.2.1.3. The revisions are deemed to be correct. The correction will not decrease the completeness and the accuracy of the monitoring plan.
Section D.5	SKS Ispat Limited and its CDM advisors	SKS Ispat & Power Limited and its CDM advisors	The revision is correct and is consistent with the name appearing in the below link

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
			http://cdm.unfccc.int/Projects/DB/TUEV-SUED1159469829.04/view
Annex 4			
	--	Project activity monitoring is respective responsibilities follows.	<p>The description was not in the previous monitoring plan. It increases the clarity of the function of the project activity monitoring plan. The validation team during site visit confirms the same. Also the project management flowchart diagram is revised to enhance the transparency and clarity.</p> <p>The correction will increase the completeness and the accuracy of the monitoring plan.</p>
	--	CDM Team: This team is responsible to review CDM project activity data collected, emissions reduced etc.	<p>An exclusive CDM team is introduced in the monitoring structure to review the data collected and emissions reduced. This will increase the correctness of data monitoring and emission reduction calculation. Also the revision in the project management flow chart increases the clarity of the monitoring hierarchy with roles and responsibility.</p> <p>The correction will increase the completeness and the accuracy of the monitoring plan.</p>
	Completeness- For Electricity generationcontrol systems. An hourly log of data is also prepared by the shift in-charge. A daily report dip level / purchase reliability of this data.	Completeness- For Electricity generationcontrol systems. An daily hourly log of data is also prepared by the shift in-charge. A monthly daily report dip level/oil level indicator/ purchase reliability of this data.	<p>The changes in the para confirms to the monitoring frequency in section D.2.1.3. Hence the revision ensures the consistency of information within the monitoring plan.</p> <p><u>Energy meters are installed for all the electrical parameters, where the measuring frequency is continuous. The revision in the recording frequency will not impact the measuring data as the measurement is independent of the recording in the logs. Moreover the energy meter reading output is cumulative, hence the revision of the recording frequency (form hourly to daily) and the reporting frequency (from daily to monthly) will not reduce completeness and</u></p>

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
			the accuracy of the monitoring plan. The correction does not reduce the completeness and the accuracy of the monitoring plan.
	Reliability- For Electricity generationcheck meters would be installed. main meters independent third party.	Reliability- For Electricity generationcheck meters are would be installed. Energy main meters independent third party.	The revision confirms to the actual practices in the projects site. The correction increases the completeness and the accuracy of the monitoring plan.
	Data Adjustments- A coal based AFBC has been implemented insteam from AFBC boiler connected turbine.	Data Adjustments- A coal based AFBC and coal based CFBC boiler has been implemented insteam from AFBC and/or CFBC boiler connected turbine.	The revision is deemed to be correct as a new CFBC boiler is installed at the project site and connected to the common steam header. This is consistent with and confirms to the revision in section 2.1.4 of the revised monitoring plan. The correction increases the completeness and the accuracy of the monitoring plan.
	Details of energy meters <u>Main Meter</u> Make: SECURE Class: 0.25 Type: E3V021, 3 PH 3 WIRE IEC – 60687 11 KV/110 V, 2000/1 A SR. NO: KAU02025 <u>Auxiliary Power Meter</u> Make: CONZERV Class: 0.5 Type: EM6004, 3 PH 3 WIRE 11 KV/110 V, 300-200/1-1 A SR. NO: 829259	Details of energy meters There are each two number of energy meters (one main & one check meter) installed to monitor EG _{GEN} and EG _{AUX} . The details of energy meters are tabulated below: (Table not included for space constraint. Please refer Annex 4 of revised monitoring plan) <u>Main Meter</u> Make: SECURE Class: 0.25 Type: E3V021, 3 PH 3 WIRE IEC – 60687 11 KV/110 V, 2000/1 A SR. NO: KAU02025 <u>Auxiliary Power Meter</u> Make: CONZERV Class: 0.5 Type: EM6004, 3 PH 3 WIRE	The revision confirms to the actual installation of meters for the project activity site. This was verified during on site visit. The correction increases the completeness and the accuracy of the monitoring plan.

Elements of Comparison	Points in registered MP changes	Proposed changes in revised MP	Assessment by the validation team with the reference of objective evidence, if relevant.
		11 KV/110 V, 300-200/1-4-A SR. NO: 829259	

The assessment of each proposed changes as mentioned in Table (a).1 above in the revised monitoring plan with respect to frequency of measurement (of the monitoring parameters) and calibration requirements and QA/QC procedures (monitoring equipment) are presented in the tabular form as below:

Table (a).2

Monitoring parameter	Description	Monitoring Equipment	Impact on frequency of measurement	Impact on calibration requirements	Impact on QA/QC procedures
Qi	Quantity of the auxiliary fuel (Diesel) used by project activity	Dipstick / Level Indicator	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
NCV _i	Net calorific value of the diesel	Supplier data (IPCC default value will be used in-case Supplier data is not available)	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
EF _i	Emission Factor of the diesel used	IPCC default value	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
EG _{GEN}	Total electricity Generated by 25 MW turbine (TG1) in the project activity	Energy Meter	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
EG _{AUX}	Auxiliary	Energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Monitoring parameter	Description	Monitoring Equipment	Impact on frequency of measurement	Impact on calibration requirements	Impact on QA/QC procedures
	electricity consumption in the project activity	Meter	Yes, with explanation: <input checked="" type="checkbox"/> No impact	Yes, with explanation: <input checked="" type="checkbox"/> No impact	Yes, with explanation: <input checked="" type="checkbox"/> No impact
EG _y	Net electricity generation in the project activity	Calculated	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Q _{WHRB1}	Steam Quantity supplied by WHRB1	Steam flow meter	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Q _{WHRB2}	Steam Quantity supplied by WHRB2	Steam flow meter	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Q _{WHRB3}	Steam Quantity supplied by WHRB3	Steam flow meter	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Q _{WHRB4}	Steam Quantity supplied by WHRB4	Steam flow meter	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Q _{TG1}	Steam Quantity at inlet of TG1	Steam flow meter	<input type="checkbox"/> Yes, with explanation:	<input type="checkbox"/> Yes, with explanation:	<input type="checkbox"/> Yes, with explanation:

Monitoring parameter	Description	Monitoring Equipment	Impact on frequency of measurement	Impact on calibration requirements	Impact on QA/QC procedures
			<input checked="" type="checkbox"/> No impact	<input checked="" type="checkbox"/> No impact	<input checked="" type="checkbox"/> No impact
Q _{AFBC}	Steam flow meters are installed at outlet of the coal fired AFBC boiler	Steam flow meter	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Q _{TG2}	Steam Quantity at TG2 inlet	Steam flow meter	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Q _{Steam loss}	Steam quantity loss	Calculated	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
T _{WHRB1}	Temperature of steam generated by WHRB1	Temperature gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
T _{WHRB2}	Temperature of steam generated by WHRB2	Temperature gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
T _{WHRB3}	Temperature of steam generated by WHRB3	Temperature gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
T _{WHRB4}	Temperature of steam	Temperature gauge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Monitoring parameter	Description	Monitoring Equipment	Impact on frequency of measurement	Impact on calibration requirements	Impact on QA/QC procedures
	generated by WHRB4		Yes, with explanation: <input checked="" type="checkbox"/> No impact	Yes, with explanation: <input checked="" type="checkbox"/> No impact	Yes, with explanation: <input checked="" type="checkbox"/> No impact
T _{TG1}	Temperature of steam at TG1 inlet	Temperature gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
T Feed Water _{WHRB1}	Temperature of feed water supplied to WHRB1	Temperature gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
T Feed Water _{WHRB2}	Temperature of feed water supplied to WHRB2	Temperature gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
T Feed Water _{WHRB3}	Temperature of feed water supplied to WHRB3	Temperature gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
T Feed Water _{WHRB4}	Temperature of feed water supplied to WHRB4	Temperature gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
P _{WHRB1}	Pressure of steam generated by WHRB1	Pressure gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact

Monitoring parameter	Description	Monitoring Equipment	Impact on frequency of measurement	Impact on calibration requirements	Impact on QA/QC procedures
P _{WHRB2}	Pressure of steam generated by WHRB2	Pressure gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
P _{WHRB3}	Pressure of steam generated by WHRB3	Pressure gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
P _{WHRB4}	Pressure of steam generated by WHRB4	Pressure gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
P _{TG1}	Pressure of steam at TG1 inlet	Pressure gauge	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Enthalpy _{WHRB1}	Enthalpy of steam generated by WHRB1	Calculated form Steam table	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Enthalpy _{WHRB2}	Enthalpy of steam generated by WHRB2	Calculated form Steam table	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Enthalpy _{WHRB3}	Enthalpy of steam generated by WHRB3	Calculated form Steam table	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact

Monitoring parameter	Description	Monitoring Equipment	Impact on frequency of measurement	Impact on calibration requirements	Impact on QA/QC procedures
			<input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>No impact</i> <i>Not Applicable</i>	<input checked="" type="checkbox"/> <i>No impact</i>
Enthalpy WHRB4	Enthalpy of steam generated by WHRB4	Calculated form Steam table	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input type="checkbox"/> <i>No impact</i> <i>Not Applicable</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>
Enthalpy Steam Loss	Enthalpy of steam loss	Calculated (Highest of the Net enthalpy values observed for the 4 WHRBs would be taken)	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input type="checkbox"/> <i>No impact</i> <i>Not Applicable</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>
Enthalpy _{TG1}	Enthalpy of steam supplied to TG1	Calculated form Steam table	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input type="checkbox"/> <i>No impact</i> <i>Not Applicable</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>
Enthalpy Feed Water WHRB1	Enthalpy of feed water being supplied to WHRB1	Calculated form Steam table	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input type="checkbox"/> <i>No impact</i> <i>Not Applicable</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>
Enthalpy Feed Water WHRB2	Enthalpy of feed water being supplied to WHRB2	Calculated form Steam table	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input type="checkbox"/> <i>No impact</i> <i>Not</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>

Monitoring parameter	Description	Monitoring Equipment	Impact on frequency of measurement	Impact on calibration requirements	Impact on QA/QC procedures
				Applicable	
Enthalpy Feed Water WHRB3	Enthalpy of feed water being supplied to WHRB3	Calculated form Steam table	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Enthalpy Feed Water WHRB4	Enthalpy of feed water being supplied to WHRB4	Calculated form Steam table	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Net Enthalpy WHRB 1	Net Enthalpy of steam generated by WHRB1	Calculated	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Net Enthalpy WHRB 2	Net Enthalpy of steam generated by WHRB2	Calculated	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Net Enthalpy WHRB3	Net Enthalpy of steam generated by WHRB3	Calculated	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Yes, with explanation: <input type="checkbox"/> No impact Not Applicable	<input type="checkbox"/> Yes, with explanation: <input checked="" type="checkbox"/> No impact
Net Enthalpy WHRB4	Net Enthalpy of steam	Calculated	<input type="checkbox"/> Yes, with 	<input type="checkbox"/> Yes, with 	<input type="checkbox"/> Yes, with

Monitoring parameter	Description	Monitoring Equipment	Impact on frequency of measurement	Impact on calibration requirements	Impact on QA/QC procedures
	generated by WHRB4		<i>explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<i>explanation:</i> <input type="checkbox"/> <i>No impact</i> <i>Not Applicable</i>	<i>explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>
$\sum ST_{WHRB\ i}$	Energy content of steam supplied by the WHRBs	Calculated	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input type="checkbox"/> <i>No impact</i> <i>Not Applicable</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>
ST_{TG1}	Energy content of steam supplied to TG1	Calculated	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input type="checkbox"/> <i>No impact</i> <i>Not Applicable</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>
Q_{CFBC}	Steam flow meters are installed at outlet of the coal fired CFBC boiler	Steam flow meter	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>
Q_{TG3}	Steam flow meter is installed at TG3 inlet.	Steam flow meter	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>	<input type="checkbox"/> <i>Yes, with explanation:</i> <input checked="" type="checkbox"/> <i>No impact</i>

(b) Accordance with approved monitoring methodology

☒ TUV Rheinland herewith confirms that the proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity.

The project activity was registered on 17/12/2006 under Version 02 of ACM0004, which is also the basis of first periodic verification. The proposed revised monitoring plan does not apply the latest version of applied methodology, however, correctly follows the applied methodology i.e. ACM0004 version 02 at the time of registration.

Nevertheless, the compliance of revised monitoring plan with monitoring methodology, version 02 of ACM0004 is demonstrated as below:

ID number of Methodology	Requirements of methodology (ACM0004, version 02)	Assessment of compliance
Qi	Volume of the auxiliary fuel used by project activity	The monitoring of this parameter is done in compliance with applied methodology. Refer section D.2.1.1 of the revised monitoring plan.
NCV _f	Net Calorific Value of Fuel (if any)	The monitoring of this parameter is done in compliance with applied methodology. Refer section D.2.1.1 of the revised monitoring plan.
EF _i	Carbon emissions factor of fuel	The monitoring of this parameter is done in compliance with applied methodology. Refer section D.2.1.1 of the revised monitoring plan.
EG _{GEN}	Total Electricity Generated	The monitoring of this parameter is done in compliance with applied methodology. Refer section D.2.1.3 of the revised monitoring plan.
EG _{AUX}	Auxiliary Electricity	The monitoring of this parameter is done in compliance with applied methodology. Refer section D.2.1.3 of the revised monitoring plan.
EG _y	Net Electricity supplied to facility	The monitoring of this parameter is done in compliance with applied methodology. Refer section D.2.1.3 of the revised monitoring plan.
Q _{WG}	Flow rate of waste gas	The monitoring of this parameter is required when the direct measurement of the electricity generated by using the waste gas is not possible as other fossil fuel(s) along with waste gas are used for electricity generation. The revised monitoring plan has been devised taking guidance from ACM0012 Ver 4.0.0 and it meets the requirements of "Alternative Method" under section 3.1.2 as mentioned on page 29 of the methodology ACM0012, Ver 4.0.0. The approach was adopted in approved revised monitoring plan dated 26/12/2009. Hence the monitoring plan deemed to comply with the requirement of the applied methodology.
NCV _w	Net calorific value of the waste gas	Same as above.
Hr	Average plant efficiency	Same as above.
Q _i	Flow rate of fuel i	Same as above.
NCV _i	Net calorific value of fuel i	Same as above.
EF _y	CO2 emission factor of the grid	This is not opted as a monitoring parameter. This is fixed ex-ante as per approved revised monitoring plan dated 26/12/2009 and registered PDD.
EF _{OM,y}	CO2 Operating Margin emission factor of the grid	Same as above.
EF _{BM,y}	CO2 Build Margin Emission factor of the grid	Same as above.
F _{i,j,y}	Amount of each fossil fuel consumed by each power	Not applicable as EF _y is fixed ex-ante.

ID number of Methodology	Requirements methodology of (ACM0004, version 02)	Assessment of compliance
	source / plant	
COEF _{i,k}	CO2 emission coefficient of each fuel type and each power source / plant	Not applicable as EF _y is fixed ex-ante.
GEN _{j,y}	Electricity generation of each power source / plant	Not applicable as EF _y is fixed ex-ante.

(c) Previous verification findings

- ☒ TUV Rheinland herewith confirms that the findings of previous verification reports, if any, have been taken into account.
- ☐ No findings from previous verifications had to be considered.

Reference of Objective Evidence:

Documents provided by the project participant(s):

Reference	Documents
/P01/	P & I Diagram, including complete details of all boilers and TGs.
/P02/	Single line diagram (Electrical)
/P03/	Technical specification documents for all WHRBs, TG1, CFBC boiler and TG3
/P04/	Details of all meters, such as type of meter, accuracy class and copy of specification.
/P05/	Onsite photograph or relevant equipment.
/P06/	Revised monitoring plan of registered PDD for the CDM project "Waste Heat Recovery based captive power generation by SKS Ispat Ltd" version 1, dated 22/11/2011.
/P07/	Revised monitoring plan of registered PDD for the CDM project "Waste Heat Recovery based captive power generation by SKS Ispat Ltd" version 1.32, dated 25/04/2012.

Background investigation and other referred documents/websites:

Reference	Document
/B01/	Approved CDM Methodology ACM0004, version 02 and ACM0012, version 4.0.0
/B02/	Registered PDD for CDM project "Waste Heat Recovery based captive power

Reference	Document
	generation by SKS Ispat Ltd", (Registered on 17/12/2006) UNFCCC Project ref. no. 0674.
/B03/	Validation Report for CDM project "Waste Heat Recovery based captive power generation by SKS Ispat Ltd" (Report No. 812604, Revision 01) issued by TÜV SÜD Industrie Service GmbH.
/B04/	Monitoring report for CDM project "Waste Heat Recovery based captive power generation by SKS Ispat Ltd" for first (1st January 2007 – 30th June 2007) and second (01/07/2007 to 31/12/2009) monitoring period.
/B05/	Verification Report for CDM project "Waste Heat Recovery based captive power generation by SKS Ispat Ltd" issued by SGS United Kingdom Limited for first (1st January 2007 – 30th June 2007) and second (01/07/2007 to 31/12/2009) monitoring period.
/B06/	Revised monitoring plan of registered PDD for the CDM project "Waste Heat Recovery based captive power generation by SKS Ispat Ltd" version 1.2, dated 26/12/2009.
/B07/	Validation report for revision of registered monitoring plan for the CDM project "Waste Heat Recovery based captive power generation by SKS Ispat Ltd" issued by SGS United Kingdom Limited dated 08/01/2010
/B08/	CDM Validation and Verification Manual (Version 01.2 as per EB 55 annex 01)
/B09/	Procedure for revising monitoring plans in accordance with para 57 of the Modalities and Procedures for the CDM, Annex 28 of EB 49
/B10/	Websites referred <ul style="list-style-type: none"> • http://cdm.unfccc.int/index.html
/B11/	Clean Development Mechanism Validation and Verification Standard (Version 02.0).
/B12/	Clean Development Mechanism Project Standard, (Version 01.0).