

**Validation report form for post-registration changes for CDM project activities**  
**(Version 01.0)**

**VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)**

<b>Title and reference number of the project activity</b>	Efficiency Improvement by Boiler Rehabilitation in fossil fuel-fired (Natural Gas) Steam Boiler System UN Ref. No. 10006
<b>Process track</b>	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
<b>Version number of the validation report on PRCs</b>	4.0
<b>Completion date of the validation report on PRCs</b>	08/12/2016
<b>Type(s) of PRCs</b>	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline <input checked="" type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan to a registered project activity <input type="checkbox"/> Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline <input checked="" type="checkbox"/> Changes to the project design of a registered project activity <input type="checkbox"/> Types of changes specific to afforestation and reforestation project activities
<b>Version number of PDD to which this report applies</b>	PDD Version 10.1 dated 08/11/2016
<b>Project participant(s)</b>	Al Jubail Fertilizer Company (Al Bayroni) Saudi Basic Industries Corporation (SABIC)
<b>Host Party</b>	Saudi Arabia
<b>Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)</b>	1, AM0056, Version 01 Efficiency improvement by boiler replacement or rehabilitation and optional fuel switch in fossil fuel-fired steam boiler systems
<b>Name of DOE</b>	Earthood Services Private Limited

Name, position and signature of the  
approver of the validation report on PRCs



Dr. Kaviraj Singh,  
Managing Director

## SECTION A. Executive summary

### Brief summary:

Earthood Services Private Limited (ESPL) has performed the validation of the post registration changes of CDM project “*Efficiency Improvement by Boiler Rehabilitation in fossil fuel-fired (Natural Gas) Steam Boiler System*” having UNFCCC ref. number 10006. The purpose of the project activity is to improve energy efficiency by heat recovery from the exhaust gases.

The proposed changes in the revised PDD (and estimated ER sheet) are in addition to a previously approved PRC (approved on 05/07/2016 by CDM EB). The previously approved PRC primarily targeted the removal of one of the boilers (amongst three given in the registered PDD) and revision of monitoring plan to include additional parameters that were required to be monitored. Once the revised monitoring data was presented by PP in accordance with accepted revised PDD, it was found that the project activity is generating emission reductions in excess of the estimated quantities in the registered/revised PDD.

Therefore, new changes were proposed in project design with regard estimated fuel savings from the system that in the registered PDD was based on expected fuel saving (of 9.7%) based on manufacturer's specification to 20.18%, which is based on actual operational/monitored data.

### Scope of validation:

This validation is an independent and objective review of the post registration changes in registered PDD. The scope of the validation of post registration changes is to determine whether there are proposed or actual changes to the project design of the registered CDM project activity. Earthood also determined whether the description in the revised PDD submitted by project participants, which describe the nature and extent of the actual changes, accurately reflects the implementation, operation and monitoring of the modified project activity. The validation of post registration changed tests the data and assertions set out in the revised PDD based on the following:

- (i) Approved methodology AM0056 Version 01 /08/ and applied tools, applied in the PDD
- (ii) Revised PDD /01/, Revised ER sheet /2/, previously approved PDD /13/ and corresponding validation opinion /10/
- (iii) UNFCCC criteria referred to in the Kyoto Protocol criteria and the CDM modalities and procedures as agreed in the Bonn Agreement and the Marrakech Accords
- (iv) CDM Validation and Verification Standard (Version 09) /05/
- (v) CDM Project Standard (Version 09) and /07/
- (vi) CDM Project Cycle Procedure (Version 09) /06/

Relevant decisions, guidance and clarifications of the CMP and CDM Executive Board and any other information and references relevant to the PA's reported emission reductions

### Validation process:

The validation process, for post registration changes, is conducted as per internal CDM Quality Manual, which includes the following steps;

- a) Contract with project participants and appointment of validation team and technical review team
- b) Desk review of the revised PDD and annexures by validation team and planning of onsite audit
- c) On site audit by validation team consisting of Team Leader and all Technical Experts, as a minimum
- d) Follow up activities e.g., interviews
- e) Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft validation report
- f) Independent technical review of the draft validation report and final/revised documentation (e.g., revised PDD, corresponding ER sheet and evidences)
- g) Reporting and closure of TR comments/findings (CARs/CLs/FARs) and final approval for the decision made
- h) Issuance of final validation report to contracted PP (or authorized representatives) and submission to UNFCCC for approval of post registration changes as appropriate.

### Conclusion:

The description in the PDD, Version 10.1 dated 08/11/2016 meets all relevant UNFCCC requirements for the CDM and correctly applies the selected baseline and monitoring methodology.

The proposed change is in project design of the registered CDM project activity, which comprises of changing the value of estimated fuel saving (or reduction in fuel consumption as referred in revised PDD) from erstwhile 9.7% (as in the registered PDD) to 20.18%. This is in accordance with the appendix 1 (Para 6, 1) of CDM PS Version 9, this is being submitted along with the request of issuance and prior approval was not mandatory. Therefore, this is being submitted along with request for issuance.

**SECTION B. Validation team, technical reviewer and approver****B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	IR	Gautam	Ashok Kumar	Central Office	Y	Y	Y	Y
2.	Technical Expert TA1.1	IR	Gautam	Ashok Kumar	Central Office	Y	Y	Y	Y
3.	Verifier	IR	Gupta	Anshika	Central Office	Y	N	N	Y
4.	Methodological Expert	IR	Gautam	Ashok Kumar	Central Office	Y	Y	Y	Y
5.	Local Expert	EI	Kumar	Rajendra	Central Office	Y	N	N	N

**B.2. Technical reviewer and approver of the validation report on PRCs**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Mahawar	Abhishek	Central Office
2.	Expert to TR	IR	Deka	Nayan Jyoti	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

**SECTION C. Means of validation****C.1. Desk review**

The validation is performed primarily as a document review of revised PDD versions submitted by PP and all other subsequent versions, if any, including final version. The desk review assessment is performed by an assessment team the submitted documents that are revised against the applicable requirements. The non-conformities identified at this stage are clubbed with the findings on site, during the site visit, and issued to client. List all documents reviewed or referenced during the validation in Appendix 3.

**C.2. On-site inspection**

Duration of on-site inspection: 28/10/2015 and 29/10/2015				
No.	Activity performed on-site	Site location	Date	Team member
1.	Project implementation, including changes in project design	Jubail	28/10/2015	Ashok Gautam
2.	Compliance of monitoring plan in the PDD with monitoring methodology	Jubail	28/10/2015	Ashok Gautam
3.	Monitoring activities and verification of date	Jubail	28/10/2015	Ashok Gautam
4.	Emission reduction calculations	Jubail	29/10/2015	Ashok Gautam

**C.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Israfilof	Azour	SABIC	28/10/2015	CDM	Ashok Gautam
2.	Shaffeulah	Azeez M	Al Jubail	28/10/2015	Environment	Ashok Gautam
3.	Al-Fayeeh	Abdullatif	Al Jubail	28/10/2015	EHSS	Ashok Gautam
4.	Jacob	Abraham	Al Jubail	28/10/2015	ECB	Ashok Gautam
5.	Shahzad	Rizwan	Al Jubail	28/10/2015	Process	Ashok Gautam
6.	Pandya	L. S.	Al Jubail	28/10/2015	Process	Ashok Gautam
7.	Takrouni	Omar	Al Jubail	28/10/2015	Management	Ashok Gautam
8.	Sung	Chyusu Hsu	Al Jubail	28/10/2015	Management	Ashok Gautam

**C.4. Clarification requests, corrective action requests and forward action requests raised**

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	Nil	Nil	Nil
Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	Nil	Nil	Nil
Corrections	Nil	Nil	Nil
Changes to the start date of the crediting period	Nil	Nil	Nil
Inclusion of a monitoring plan to a registered project activity	Nil	Nil	Nil
Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline	Nil	Nil	Nil
Changes to the project design of a registered project activity	Nil	Nil	Nil
Types of changes specific to afforestation and reforestation project activities	Nil	Nil	Nil
Others (inconsistencies and incomplete information)	Nil	2	Nil
<b>Total</b>	Nil	2	Nil

**SECTION D. Validation findings****D.1. Compliance with PDD form**

<b>Means of validation</b>	The revised PDD has been submitted in both tracked and clean versions /1/. The latest PDD template version 08 (CDM-PDD-FORM) available on the UNFCCC website has been used, which is appropriate for large scale CDM PAs. The previously accepted revised PDD /13/ and revised PDD /1/ were reviewed for the consistency of the information and it is confirmed that information transferred from previous template to new template is materially the same as in the accepted revised PDD except for the content of proposed PRCs.
<b>Findings</b>	None
<b>Conclusion</b>	The revised PDD applied the latest PDD template available and the information has been transferred to the new template is materially the same.

**D.2. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline**

<b>Means of validation</b>	NA
<b>Findings</b>	NA

<b>Conclusion</b>	NA
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**D.3. Corrections**

<b>Means of validation</b>	<p>1. The line diagrams given in PDD did not give the location of pressure transmitters used for monitoring of parameter PRESS<sub>PJ</sub> (Pressure of the generated steam). This has been revised to give the location which was found to be consistent with onsite observation of assessment team.</p> <p>2. In accordance with PRC, the PDD template has been upgraded from version 6.0 to 8.0. Inline to the upgraded template, minor corrections have been done which does not change the project description or design.</p>
<b>Findings</b>	None
<b>Conclusion</b>	<p>1. The revised line diagrams has been revised to provide consistent information. Since it does not affect the scale of project activity, applicability of methodology and additionality, it has been submitted with the request of issuance inline to appendix 1 of latest project standard.</p> <p>2. The changes made to the template are consistent with the latest applicable version. The information reported is consistent and accurate.</p>

**D.4. Changes to the start date of the crediting period**

<b>Means of validation</b>	NA
<b>Findings</b>	NA
<b>Conclusion</b>	NA

**D.5. Inclusion of a monitoring plan to a registered project activity**

<b>Means of validation</b>	NA
<b>Findings</b>	NA
<b>Conclusion</b>	NA

**D.6. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline**

<b>Means of validation</b>	NA
<b>Findings</b>	NA
<b>Conclusion</b>	NA

**D.7. Changes to the project design of a registered project activity**

<b>Means of validation</b>	<p>The following changes are proposed in this PRC;</p> <p><b>1. Change in the estimated value (%) for fuel savings</b></p> <p>The expected fuel saving in the project activity, over the baseline, was estimated and validated by the validating DOE as 9.7% in the registered PDD /3/. This value remained unchanged in the previously approved revised PDD, particularly in absence of monitored data as per revised monitoring plan. The complete monitoring data set was presented by PP after the CDM EB has approved the previous revised PDD, which primarily involved the removal of one boiler and update of monitoring plant as per applied methodology and referenced tool. The verification team after the review of monitoring data identified that the expected fuel saving by the project activity have surpassed the expected value in the registered PDD. In that regard, it was established that the expected savings were based on the minimum guaranteed by supplier when the project activity was modified. In actual operation, these observed/recorded data was higher in the order, which led to high fuel savings and consequently higher ERs.</p> <p>The fuel saving is a calculated value using FC<sub>i,j,y</sub> [Quantity of natural gas combusted in one year] and FC<sub>BL,y</sub> [Fossil fuel that would have been combusted in the absence of the project activity during the monitoring period]. This estimated value was based on the minimum guaranteed value supplied by the technology manufacturer. However, the actual fuel saving during the project operation was achieved as 18.28%. The value of registered PDD (9.7%) therefore doesn't reflect the actual operations of the project activity in terms of average fuel savings because the actual achieved fuel savings (18.28%) are significantly higher. This increase in the fuel saving lead to higher emission reductions than the estimated in the registered</p>
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PDD/3/. The PDD has also been revised accordingly for the appropriate number of emission reduction (66,098 tCO<sub>2</sub>).

Emission reduction reported, for the project activity, in the monitoring report made public for the first monitoring period (01/10/2014 to 30/09/2015) were 15,651 tCO<sub>2e</sub>. However, the calculation procedures followed were not inline to the methodology applied and registered PDD. Thus, after recalculation of the numbers inline to the registered PDD it was realised that actual fuel savings (53,505 tCO<sub>2</sub>) became significantly higher than the estimated (31,857 tCO<sub>2</sub>) in the registered PDD. It was realised that this huge gap between achieved and estimated ERs is due to the higher fuel saving achieved. Therefore, in order to revise and have the appropriate number of fuel saving percentage, there was a need to revise the PDD.

The actual value achieved during the monitoring period (01/10/2014 to 30/09/2015) is 18.28% which was verified from the plant records/12/. Since the value used for fuel saving was minimum guaranteed from the supplier and is not the appropriate representation of the actual achieved therefore the actual achieve value was considered appropriate. However, there is a possibility to increase in this number in future because most of the industry continue to minimise the losses and increase their energy efficiency. PP has considered a margin of  $\pm 10\%$  to take into account any increase or decrease in fuel savings in the future. The fuel saving range has been calculated as 16.452% to 20.108% (18.28  $\pm 10\%$ ). PP, for the purpose of estimation in the revised PDD has used the upper value (20.18%). This was accepted because of the following reasons; it is very difficult to estimate the exact number of fuel saving percentage for the future years, there are variations in fuel quality and industrial practices etc., generally there is upward trend in the energy efficiency in majority of the industries, upto 20% fuel saving by applying various energy efficiency measures are quite possible in the industries and the proposed values is based on the actual result achieved (+10%) and are verifiable. Hence, the value of fuel savings is being revised to 20.18% in the revised PDD /1/.

## 2. Minor/editorial changes

There are few other editorial changes as a result of switch to version 8.0 of the PDD template from version 6.0. These changes are not considered material.

PP has also made minor editorial changes in the figures B.7.1 & B.7.2 to mention the pressure transmitters for both the boilers. These corrections are done just to provide more clarity in the project description.

The monitoring report (01/10/2014 to 30/09/2015) which was made available for the publication reported the emission reduction as 15,651 tCO<sub>2e</sub>, which were quite less than the estimated (41,831 tCO<sub>2e</sub>) number of registered PDD/3/. However, the used calculation method was not found inline to the applied methodology and tool. Also, it was noted by the assessment team that the monitoring plan is not inline to the applied methodology and tool since few required parameters were found missing from the monitoring plan of the registered PDD. As mentioned above the value of fuel saving is a calculated value which requires monitoring of input value of  $FC_{i,j,y}$  [Quantity of natural gas combusted in one year] which were not part of the monitoring parameters of the registered PDD/3/. PP has proposed a PRC for prior approval from the CDM EB for making the monitoring plan inline with the applied methodology and removal of one boiler from the project design. This PRC request (PRC 10006-001) was approved by CDM EB on 05/07/2016. After PRC approval PP has recalculated the emission reduction using the revised monitoring plan which has the input parameters required for calculating the fuel saving. Since the monitored data related to these parameters, were not made available and also not used to calculate the fuel saving in emission reduction earlier therefore it was practically not possible to reach any actual value of fuel savings and its impact on emission reduction. Therefore, there was no technical possibility of identifying this correction (change in fuel saving) in project design in the previously submitted PRC. Thus, PRC is sought along with the request of issuance because the above discussed change does not impact the applicability and application of the applied methodology, additionality of project activity and scale of project activity. Also, it comes under the purview of Appendix 1 of Project Standard Version 09, thus no

	prior approval is sought.
<b>Findings</b>	None
<b>Conclusion</b>	<p>The assessment team confirms that the changes in project design are not adversely affecting the additionality of the project as it remains additional. The additionality argument demonstrated in the registered PDD i.e., First of its kind, do not get adversely affected by the proposed change.</p> <p>The changes do not affect the scale of the project, as the project activity remains the large scale project.</p> <p>The application and applicability of the applied methodology AM0056 Version 01 is duly respected in the revised PDD.</p> <p>The other changes brought into the monitoring plan are in compliance with applied monitoring methodology /08/ and/or tool /10/.</p> <p>It is further confirmed by the verification team that proposed changes include all types of changes with regard to completeness of the information</p>

\*only those changes has been listed which made an impact on the emission reduction calculation and thereby resulted in changed numbers

#### D.8. Types of changes specific to afforestation and reforestation project activities

<b>Means of validation</b>	NA
<b>Findings</b>	NA
<b>Conclusion</b>	NA

### SECTION E. Internal quality control

A draft validation report that is prepared by assessment team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable CDM rules/requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the assessment team.

During the technical review process additional findings may be identified or the closed out findings may be opened, which needs to be satisfactorily resolved before the request for registration is submitted to UNFCCC. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the assessment team. The decision taken by the Technical Reviewer is final and authorized on behalf of Earthood Services Private Limited.



**SECTION F. Validation opinion**

Earthood Services Private Limited (Earthood) has performed the validation of the post registration changes of the project activity Efficiency Improvement by Boiler Rehabilitation in fossil fuel-fired (Natural Gas) Steam Boiler System by Al Jubail Fertilizer Company (Al Bayroni).

The validation was performed on the basis of rules and requirements defined by UNFCCC for the CDM project activities. The review of the revised PDD, supporting documentation and subsequent follow-up actions (including onsite visit and interviews), have provided Earthood with sufficient evidence to determine the fulfilment of stated criteria.

The description in the revised PDD Version 10.1 dated 08/11/2016 meets all relevant UNFCCC requirements for the CDM and correctly applies the selected baseline and monitoring methodology.

This report is the combined assessment opinion for all the changes that are proposed in the PDD and request is submitted for prior approval by CDM EB.

## Appendix 1. Abbreviations

Abbreviations	Full texts
ACM	Approved Consolidated Methodology
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
CER	Certified Emission Reduction
CL	Clarification Request
DOE	Designated Operational Entity
DNA	Designated National Authority
EB	Executive Board
ESCOM	Electricity Supply Company
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
INR	Indian National Rupee
JMR	Joint Meter Reading
kWh	kilo Watt hour
kV	kilo Volt
MP	Monitoring Plan
MoV	Means of Verification
MWh	Mega Watt Hour
PDD	Project Design Document
PLF	Plant Load Factor
PP	Project Participant
PPA	Power Purchase Agreement
PRC	Project Registration Changes
O&M	Operation and Maintenance
QA/QC	Quality Assurance / Quality Control
RNWEKPL	Al Jubail Fertilizer Company (Al Bayroni)
RMP	Revised Monitoring Plan
SCADA	Supervisory Control and Data Acquisition
TA	Technical Area
UNFCCC	United Nations Framework Convention on Climate Change

## Appendix 2. Competence of team members and technical reviewers

Competence Statement	
<b>Name</b>	Ashok Gautam
<b>Country</b>	India
<b>Education</b>	M. Sc. (Environmental Sciences) M. Tech. (Energy & Environmental Management)
<b>Experience</b>	14 Years +
<b>Field</b>	Energy, Climate Change & Environment

Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-I.A., AMS-I.C. AMS-II.D., AMS-II.G., AMS-III.E., AMS-III.H., AMS-III.Z., AMS-III.AV., AM0029, AM0025, AM0056, ACM0001, ACM0002, ACM0004, ACM0006		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.1)	YES		
TA Expert (1.2)	YES		
TA Expert (3.1)	YES		
TA Expert (13.1)	YES		
Reviewed by	Abhishek Mahawar	Date	08/09/2016
Approved by	Kaviraj Singh	Date	08/09/2016

Competence Statement			
Name	Anshika Gupta		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	2 Year +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.A., AMS-II.G., ACM0002, AMS-III.A.V.		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (1.2, 3.1)	NO		
Reviewed by	Abhishek Mahawar	Date	08/09/2016
Approved by	Ashok Kumar Gautam	Date	08/09/2016

Competence Statement			
Name	Rajendra Kumar		
Country	Saudi Arabia		
Education	MBA (Finance)		
Experience	8 Yrs		
Field	Finance		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		

<b>Methodology Expert</b>	NO		
<b>Local expert</b>	YES (Saudi Arabia)		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	NO		
<b>TA Expert</b>	NO		
<b>Reviewed by</b>	Abhishek Mahawar	<b>Date</b>	13/09/2016
<b>Approved by</b>	Ashok Kumar Gautam	<b>Date</b>	13/09/2016

Competence Statement			
Name	Abhishek Mahawar		
Country	India		
Education	B. Tech. (Chemical Engineering) MBA (Finance)		
Experience	7 Years +		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS.I.F. and ACM0002		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert (1.2)	YES		
Reviewed by	Ashok Gautam	Date	07/09/2016
Approved by	Kaviraj Singh	Date	07/09/2016

Competence Statement			
Name	Nayan Jyoti Deka		
Country	India		
Education	M.Tech. (Energy Technology), Tezpur University		
Experience	8 Years +		
Field	Climate Change & Energy Management		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-III.H., AMS-I.C., ACM0006, ACM0002		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.1, 1.2, 3.1, 13.1)	YES		
Reviewed by	Abhishek Mahawar	Date	08/09/2016
Approved by	Ashok Kumar Gautam	Date	08/09/2016

### Appendix 3. Documents reviewed or referenced

No	Author	Title	References to the document	Provider
1.	PP	Revised PDD (Clean and Tracked) – currently proposed	Version 10.1 dated 08/11/2016	PP
2.	PP	Revised ER sheet -currently proposed	Corresponding to revised PDD	PP
3.	PP	Registered PDD	Version 06 dated 08/07/2014	Others
4.	SGS	Validation Report (Registered PDD)	Version 03 dated 14/07/2014	Others
5.	UNFCCC	CDM Validation and Verification Standard (VVS)	Version 09	Others
6.	UNFCCC	CDM Project Cycle Procedure (PCP)	Version 09	Others
7.	UNFCCC	CDM Project Standard (PS)	Version 09	Others
8.	UNFCCC	AM0056 Efficiency improvement by boiler replacement or rehabilitation and optional fuel switch in fossil fuel-fired steam boiler systems	Version 01	Others
9.	UNFCCC	CDM-PDD-Form, Version 08	<a href="https://cdm.unfccc.int/Reference/PDDs_Forms/index.html">https://cdm.unfccc.int/Reference/PDDs_Forms/index.html</a>	Others
10.	Earthood	PRC validation opinion (approved on 05/07/2016 by CDM EB)	Version 3.0, dated 31/05/2016	Others
11.	UNFCCC	Combined tool to identify the baseline scenario and demonstrate additionality	Version 5.0	Others
12.	PP	Plant records for monitoring parameters used to calculate fuel savings for the period 01/10/2014 to 30/09/2015	NA	Others
13	PP	Revised PDD (approved on 05/07/2016 by CDM EB)	Version 8.0, dated 30/05/2016	Others

### Appendix 4. Clarification requests, corrective action requests and forward action requests

**Table 1. CL from this validation**

No CL raised during PRC assessment

**Table 2. CAR from this validation**

CAR ID	01	Section no.	-	Date : 08/11/2016
<b>Description of CAR</b>				
The line diagrams given in PDD under figure B.7.1 and B.7.2 does not mention pressure transmitters.				
<b>Project participant response</b>				Date : 08/11/2016
<i>The line diagrams has been revised.</i>				
<b>Documentation provided by project participant</b>				
<i>Revised PDD</i>				
<b>DOE assessment</b>				Date: 08/11/2016
The revised line diagrams mentions all the equipment consistently. Thus this CAR is <b>closed</b> .				

CAR ID	02	Section no.	-	Date : 08/11/2016
<b>Description of CAR</b>				

After applying the correction factor to temperature of generated steam inline to the requirements of verification activity, the fuel efficiency has been revised to 18.28%. However, PDD mentions an inconsistent number under footnote 1.	
<b>Project participant response</b>	<b>Date :</b> 08/11/2016
<i>The number has been revised to be consistent.</i>	
<b>Documentation provided by project participant</b>	
<i>Revised PDD</i>	
<b>DOE assessment</b>	<b>Date:</b> 08/11/2016
The numbers are consistent. Thus this CAR is closed.	

**Table 3. FAR from this validation**

There is no FAR raised during PRC assessment.

### Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Registration Keywords: post-registration change, project activities, validation report		