




**Validation report form for post-registration changes for
CDM project activities
(Version 03.0)**

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION

Title and UNFCCC reference number of the project activity	The TIMARPUR-OKHLA Waste Management Company Pvt. Ltd.'s (TOWMCL) integrated waste to energy project at Delhi. UNFCCC reference no. 1254
Process track	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
Version number of the validation report	Version 3.0
Completion date of the validation report	30/01/2020
Type(s) of PRCs	<input checked="" type="checkbox"/> Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents ¹ <input type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan <input checked="" type="checkbox"/> Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents <input type="checkbox"/> Changes to the project design <input type="checkbox"/> Changes specific to afforestation and reforestation project activities
Version number of PDD to which this report applies	Version 15.0
Project participants	Timarpur Okhla Waste Management Co Ltd
Host Party	India
Applied methodologies and standardized baselines	AM0025 (version 06); "Avoided emissions from organic waste through alternative waste treatment process."
Mandatory sectoral scopes	13
Conditional sectoral scopes, if applicable	01
Name and UNFCCC reference number of	Earthood Services Private Limited

¹ Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

the DOE	E-0066
Name, position and signature of the approver of the validation report	 Dr. Kaviraj Singh Managing Director

SECTION A. Executive summary

Brief summary of the project activity

The purpose of the project activity is utilization of municipal solid waste (MSW) for generation of electricity in the host country (India), thereby, reducing carbon dioxide emissions from the atmosphere by 2 measures, namely:

- (a) by displacement of electricity which would have otherwise generated in fossil fuel based power plants connected to the regional grid.
- (b) by avoiding the methane emission from degrading solid waste that would have been dumped in open landfill in absence of the project activity.

The waste-to-energy plant implemented by the entity - TIMARPUR-OKHLA Waste Management Company Pvt. Ltd (hereinafter referred as "PP") has a power generation capacity of 20.9 MW connected to the regional grid for power export. The MSW is supplied to the project site by local municipalities namely, Municipal Corporation of Delhi (MCD) and New Delhi Municipal Council (NDMC). The collected waste is converted to Refuse Derived Fuel (RDF) in the on-site RDF plant by applying physical, mechanical and thermal processes (Section A.3 of PDD /9/).

Scope of validation

The scope of the services provided by Earthood Services Private Limited for the project is to perform validation of the post registration changes of the project activity. The scope of validation is to assess the claims and assumptions made in the revised project design document (PDD) against the UNFCCC criteria, including but not limited to, CDM PS PA /1/, CDM VVS PA /3/, applied methodology/11/ and other relevant rules and requirements established for CDM project activities.

Conclusion

The review of the revised PDD, supporting documentation and subsequent follow-up actions (onsite visit and interviews) have provided ESPL with sufficient evidence to determine the fulfilment of stated criteria.

ESPL has performed the validation of the post registration changes of the CDM PA "The TIMARPUR-OKHLA Waste Management Company Pvt Ltd's (TOWMCL) integrated waste to energy project in Delhi" having UNFCCC Ref. Number 1254. The post registration change was identified during the verification for the 5th monitoring period - 10/03/2017 to 09/03/2018.

The proposed post registration change includes the following:

- a) Deviation from the proposed monitoring plan for the period from 10/03/2017 till 31/03/2020.
- c) Revision in the monitoring plan applicable from 31/03/2020 onwards

The validation of post registration changes concluded that the type of changes proposed in the revised PDD Version 15 can be categorized under Appendix of CDM PS and hence does not require prior approval by the CDM EB as per procedures. The validation confirms that the proposed post registration changes comply with all the relevant CDM requirements of the applied methodology and all other applicable tools and guidance.

This report is the combined assessment opinion for all the changes from the registered PDD and request is hereby submitted with issuance request to CDM EB.

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/document review	On-site inspection	Interviews	Validation findings
1.	Team Leader	IR	Mahala	Deepika	Central Office	Y	Y	Y	Y
2.	Technical Expert (TA13.1, TA1.1)	IR	Gautam	Ashok	Central Office	Y	Y	Y	Y
3.	Methodology Expert	IR	Kumar	Sanjeev	Central Office	Y	N	N	Y
4.	Local Expert	IR	Gautam	Ashok	Central Office	Y	Y	Y	Y
5.	Verifier	IR	Guleria	Shifali	Central Office	Y	N	N	Y
6.	Observer	IR	Singh	Kaviraj	Central Office	N	Y	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	Garg	Shreya	Central Office
2.	TA expert to TR	IR	Singh	Kaviraj	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

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

A desk review was conducted by the validation team that included

- A review of the data and information presented to verify its completeness;
- A review of the registered monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions;

A complete list of documents/evidences reviewed is included as Appendix 3.

C.2. On-site inspection

Duration of on-site inspection: 06/03/2019				
No.	Activity performed on-site	Site location	Date	Team member
1.	Opening Meeting	Okhla, Delhi	06/03/2019	Deepika Mahala, Ashok Gautam
2.	Compliance of monitoring plan	Okhla, Delhi	06/03/2019	Deepika Mahala, Ashok Gautam
3.	Implementation of PA	Okhla, Delhi	06/03/2019	Deepika Mahala, Ashok Gautam

4.	Interviews with the monitoring team	Okhla, Delhi	06/03/2019	Deepika Mahala, Ashok Gautam
5.	Review of monitoring evidences	Okhla, Delhi	06/03/2019	Deepika Mahala, Ashok Gautam
6.	Compilation of findings	Okhla, Delhi	06/03/2019	Deepika Mahala, Ashok Gautam
7.	Closing meeting	Okhla, Delhi	06/03/2019	Deepika Mahala, Ashok Gautam

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Jain	Amisha	Ernst and Young	06/03/2019	Post registration changes	Deepika Mahala
2.	Naveen	Pandey	Jindal Ecopolis	06/03/2019	Post registration changes	Deepika Mahala
3.	Neelesh	Gupta	Jindal Ecopolis	06/03/2019	Post registration changes	Deepika Mahala
4.	Shashank	Saxena	Ernst and Young	06/03/2019	Post registration changes	Deepika Mahala

C.4. Sampling approach

No sampling approach was not required during this validation as the scope of validation did not cover verification of monitored data. The scope of this PRC validation only covers the description of the changes to the PDD and the framework approach for calculation of ERs during the deviation period. The application of the approach for ER calculation during the deviation period and the related monitored data will be verified during the corresponding verification for the monitoring period.

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	-	CAR#02	-
Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents	CL#01	CAR#03	-
Corrections	-	-	-
Changes to the start date of the crediting period	-	-	-
Inclusion of a monitoring plan	-	-	-
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents	CL#01	CAR#03	-
Changes to the project design	-	-	-
Changes specific to afforestation and reforestation project activities	-	-	-
Others (please specify)	-	-	-
Total	1	2	0

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	The PDD form/5/ used is CDM-PDD-FORM version 11 /12/. The validation team checked and confirmed that the applied form is the latest PDD form/12/ available on UNFCCC website. It is also assessed and confirmed that all the changes made to the registered PDD/1/ are clearly identifiable in track change mode.
Findings	CAR#02 was raised and resolved.
Conclusion	All the sections of the form were filled as per the guidelines and provide all the relevant details in transparent manner. The revised PDD /5/ was found to be in compliance with the applicable latest PDD form and the instructions therein. The information transferred to the later valid version of the PDD form/12/ is materially

the same as that in the registered PDD/1/ except the items of proposed post registration changes.

D.2. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

Means of validation	<p>Context of the proposed permanent changes in monitoring plan Subsequent to the issues raised by UNFCCC during RFI submission /15/, the validation team reassessed the project documents and concluded that the registered PDD /09/ was not in compliance with the applied methodology AM0025 version 6.0 /11/.</p> <p><u>For the parameter Fraction of fossil carbon in waste type i - FCFi:</u></p> <p>The applied methodology/11/ prescribes to determine the value of the parameter through sampling where the samples shall be chosen in a manner that ensures estimation with 20% uncertainty at 95% confidence level and frequency of the monitoring should be annual. However, it was found to be listed as an ex-ante parameter in the registered PDD/9/.</p> <p>The PP has proposed to revise the PDD/5/ to update the monitoring plan to include the parameter as monitored parameter and determine the value of the parameter through sampling in line with the applied methodology/11/.</p> <p>However, the implementation of the revised monitoring plan will be possible only after 31/03/2020.</p> <p>Thus for the period upto 31/03/2020, the PP has proposed an alternative method to determine the value. The PP has applied IPCC default value of 2006, volume 5 (waste), (table 2.4, page 2.14 – Volume 5)/14/ for the period between 10/03/2017-31/03/2020. The following default values of the IPCC 2006 have been applied in the MR/6/:</p> <table border="1" data-bbox="448 1055 1439 1496"> <thead> <tr> <th>Waste type</th><th>Fraction of carbon content</th></tr> </thead> <tbody> <tr> <td>Paper/cardboard</td><td>5</td></tr> <tr> <td>Textiles</td><td>50</td></tr> <tr> <td>Food Waste</td><td>0</td></tr> <tr> <td>Wood</td><td>0</td></tr> <tr> <td>Garden and park waste</td><td>0</td></tr> <tr> <td>Rubber and leather</td><td>20</td></tr> <tr> <td>Plastics</td><td>100</td></tr> <tr> <td>other, inert waste</td><td>100</td></tr> </tbody> </table> <p>The values are from reliable source document and highest possible values available. The parameter is used in calculation of project emission which directly leads to reduction of total ERs when the values of this parameters are increased as checked in the ER sheet/8/. Thus, applying highest default value was found to be conservative and was accepted by the validation team as temporary deviation as per para 281-286 of the VVS for PoA version 2.0/3/.</p> <p>The detailed assessment of the permanent change in the monitoring plan for this parameter is discussed below under section D.6.</p> <p>Therefore, the assessment team considers the proposed deviation as appropriately accounting the conservativeness of the emission reduction with reasonable confidence level.</p> <p>The validation team also noted that the above the proposed alternative monitoring arrangements produce a conservative estimate of greenhouse gas (GHG) emission reductions or net anthropogenic GHG removals. Thus, falls under category (b) of</p>	Waste type	Fraction of carbon content	Paper/cardboard	5	Textiles	50	Food Waste	0	Wood	0	Garden and park waste	0	Rubber and leather	20	Plastics	100	other, inert waste	100
Waste type	Fraction of carbon content																		
Paper/cardboard	5																		
Textiles	50																		
Food Waste	0																		
Wood	0																		
Garden and park waste	0																		
Rubber and leather	20																		
Plastics	100																		
other, inert waste	100																		

	Appendix of CDM PS PA Version 2 /1/, Therefore it would not require 'prior approval by the CDM EB'.
Findings	CL#01 and CAR#03 was raised and resolved.
Conclusion	<p>The DOE confirms that</p> <ul style="list-style-type: none"> • The deviation applies for the monitoring period from 10/03/2017 to 31/03/2020 (as per para 285 of CDM VVS PA V2 /3/). • The deviation does fall under provision (b) of Appendix 1 of PS and hence is submitted for approval by CDM EB prior to request for issuance of monitoring period under verification. (as per para 284 of CDM VVS PA V2 /3/) • There will be no over-estimation of emission reductions due to deviation as the assumptions and formulae are applied in a conservative manner. • The deviation complies with the relevant requirements related to the temporary deviation from the registered monitoring plan as prescribed in the PS for PA/1/ and VVS for PA/3/.

D.3. Corrections

Means of validation	NA
Findings	NA
Conclusion	NA

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

Means of validation	NA
Findings	NA
Conclusion	NA

D.5. Inclusion of a monitoring plan

Means of validation	NA
Findings	NA
Conclusion	NA

D.6. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

Means of validation	<p><u>For the parameter Fraction of fossil carbon in waste type i - FCFi:</u></p> <p>The parameter is supposed to be monitored annually as per the applied methodology. However, it is listed as an ex-ante parameter determined from IPCC default in the registered PDD/9/. The PP has proposed to revise the PDD/9/ to update the monitoring plan.</p> <p>The methodology prescribes the parameter to be determined through sampling where the samples shall be chosen in a manner that ensures estimation with 20% uncertainty at 95% confidence level. The PP has revised the PDD/5/ to include same method to determine the parameter and moved it from the list of ex-ante to ex-post parameters. Since, it is not possible to do the monitoring for current period, the PP has requested for temporary deviation as describe above.</p> <p><u>For the purpose of ex-ante calculation:</u></p> <table border="1"> <thead> <tr> <th>Waste type</th> <th>Fraction of carbon content</th> </tr> </thead> <tbody> <tr> <td>Paper/cardboard</td> <td>1</td> </tr> <tr> <td>Textiles</td> <td>20</td> </tr> <tr> <td>Food Waste</td> <td>0</td> </tr> <tr> <td>Wood</td> <td>0</td> </tr> <tr> <td>Garden and park waste</td> <td>0</td> </tr> <tr> <td>Rubber and leather</td> <td>20</td> </tr> <tr> <td>Plastics</td> <td>100</td> </tr> <tr> <td>other, inert waste</td> <td>100</td> </tr> </tbody> </table> <p>PP has proposed to change the parameter from ex-ante to ex-post parameters and the actual value of the parameter will be determined through third party sampling as stated in ther revised PDD/5/. The values written above were used in the estimation of emission reduction at the time of registration, which were the default average values of the fraction of carbon content as per the IPCC default value of 2006, volume 5 (waste), Table 2.4 on page no. 2.14/14/. At the time of verification, for achieved ERs, the actual value will be determined through monitoring. For the purpose of estimated ERs, considering average value of the fraction of carbon content from the source was found to be reasonable. The change makes the PDD/5/ in line with the applied methodology/11/, thus was accepted by the validation team as per para 296-299 of the VVS for PoA version 2.0/3/. The change does not impact the applicability of the applied methodologies or the other applied methodological regulatory documents, or the accuracy and completeness. Therefore, it falls under category (c) of appendix 1 of PS for PoA version 2.0/1/ and it is being submitted along with the issuance request</p> <p><u>For the parameter Combustion efficiency for waste type 'i'- EFi:</u></p> <p>The parameter is supposed to be monitored annually as per the applied methodology. However, it is not listed in the PDD/9/. The PP has proposed to revise the PDD/5/ to update the monitoring plan.</p> <p>The methodology prescribes the parameter to be determined through project specific data, country specific data or IPCC default values. As per guidance from the Board, IPCC default values should be used only when country or project specific data are not available or difficult to obtain. The PP and validation team could not find any country specific data online and project specific would involve</p>	Waste type	Fraction of carbon content	Paper/cardboard	1	Textiles	20	Food Waste	0	Wood	0	Garden and park waste	0	Rubber and leather	20	Plastics	100	other, inert waste	100
Waste type	Fraction of carbon content																		
Paper/cardboard	1																		
Textiles	20																		
Food Waste	0																		
Wood	0																		
Garden and park waste	0																		
Rubber and leather	20																		
Plastics	100																		
other, inert waste	100																		

	<p>extra cost which is not feasible. Thus, the source of data chosen is IPCC default value of 2006, Volume 5 (waste), section 5.4.1.3 on page 5.20./14/.</p> <p>For the purpose of ex-ante calculation:</p> <p>The parameter is now a monitored parameter and the actual value of the parameter will be determined through third party sampling as stated in the revised PDD/5/. The value of 100% for the parameter was default IPCC values used in the estimation of emission reduction at the time of registration, which was the default average values of the fraction of combustion efficiency as per the IPCC default value of 2006, volume 5 (waste), section 5.4.1.3 on page 5.20./14/. As per the IPCC default value, The combustion efficiencies are close to 100 percent for waste incinerators. Therefore, the value of 100% selected for the ex-ante calculation is accepted by validation team. For the purpose of achieved ERs, actual value determined through monitoring and for the calculation of estimated ERs considering the Fraction of carbon content from the source was found to be reasonable.</p> <p>The change makes the PDD/5/ is in line with the applied methodology, thus was accepted by the validation team. The change does not impact the applicability of the applied methodologies or the other applied methodological regulatory documents, or the accuracy and completeness. Therefore, it falls under category (c) of appendix 1 of PS for PoA version 2.0/1/ and it is being submitted along with the issuance request.</p>
Findings	CL#01 and CAR#03 was raised and resolved.
Conclusion	<p>The validation team confirms that the changes to the registered monitoring plan described in the revised PDD/5/ are in compliance with the applied methodology and the tools.</p> <p>The validation team confirms that the revised PDD/5/ is conforming to the methodology for introduction of additional monitoring parameters, as described above. Further, the DOE confirms that the changes do not impact the conservativeness of the monitoring and verification process, including the related emission reduction calculations.</p> <p>The permanent changes to the registered monitoring plan fall under any of the provision of Appendix of PS and hence do not require prior approval by CDM EB.</p> <p>The validation team confirms that the permanent changes comply with all the requirements of the applied methodology and are in accordance with relevant quoted paragraphs of CDM PS Version 2/1/.</p>

D.7. Changes to the project design

Means of validation	NA
Findings	NA
Conclusion	NA

D.8. Changes specific to afforestation and reforestation project activities

Means of validation	NA
Findings	NA
Conclusion	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 a validation of the post registration changes of the project activity "The TIMARPUR-OKHLA Waste Management Company Pvt Ltd's (TOWMCL) integrated waste to energy project in Delhi" by 'TIMARPUR-OKHLA Waste Management Company Pvt. Ltd (TOWMCL)'. Earthood is accredited for the validation function for specific sectoral scopes (1, 13) the CDM project activity falls into.

The validation was performed on the basis of rules and requirements defined by UNFCCC for the CDM project activities. The review of the registered PDD, applied methodology, 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.

It is Earthood's opinion that the temporary deviation and permanent changes proposed in the revised PDD Version 15 do not raise any concern with regards to applicability of established baseline, additionality or scale of the project activity. The DOE confirms that the information included in the revised PDD accurately reflects the actual project and the corrected parameters reflect the appropriate application of the applied methodology and the registered monitoring plan.

Considering that not all the proposed changes are covered under the appendix of CDM PS Version 2 therefore do not require prior approval from CDM EB. This is the combined and complete request with regarding proposed changes that is submitted along with issuance request in accordance with the CDM procedures.

Appendix 1. Abbreviations

Abbreviations	Full texts
ACM	Approved Consolidated Methodology
AM	Approved Methodology
AMS	Approved Methodology for SSC Projects
BE	Baseline Emission
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CH ₄	Methane
CL	Clarification Request
CM	Combined Margin
CME	Coordinating/Managing Entity
CO ₂	Carbon di oxide
CP	Crediting Period
CPA DD	Component Project Activity Design Document
DNA	Designated National Authority
DR	Desk Review
DOE	Designated Operational Entity
EB	Executive Board
EIA	Environmental Impact Assessment
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GHG	Green House Gas
GSC/GSP	Global Stakeholder Consultation Process
GW	Giga Watt
GWh	Giga Watt hour
IPCC	Intergovernmental Panel on Climate Change
KP	Kyoto Protocol
kW	kilo Watt
kWh	kilo Watt hour
LoA	Letter of Approval/Authorization
LSC	Local Stakeholder Consultation Process
MoC	Modalities of Communication
MoV	Means of Validation
MP	Monitoring Plan
MW	Mega Watt
MWh	Mega Watt hour
N ₂ O	Nitrous Oxide
OM	Operating Margin
PCP	Project Cycle Procedure
PDD	Project Design Document
PE	Project Emission
PLF	Plant Load Factor
PoA DD	Programme of Activities Design Document
PP	Project Participant
PS	Project Standard
RFR	Request for Registration
tCO ₂ e	Tonnes of Carbon di oxide equivalent
TPH	Tonnes Per Hour
UNFCCC	United Nations Framework Convention on Climate Change
V	Version
VVS	Validation and Verification Standard
Project Specific	
MoEF	Ministry of Environment, Forest and Climate Change (DNA of India)

TOWMCL	TIMARPUR-OKHLA Waste Management Company Pvt. Ltd
MSW	Municipal Solid Waste
MCD	Municipal Corporation of Delhi
NDMC	New Delhi Municipal Council
RDF	Refuse Derived Fuel
ESPL	Earthood Services Private Limited
FCFi	Faction of fossil carbon in waste type i
EFi	Combustion efficiency for waste type 'i'

Appendix 2. Competence of team members and technical reviewers

Competence Statement			
Name	Deepika Mahala		
Country	India		
Education	M. Sc. (Environmental Management), GGSIP University B.Sc. Hons. (Chemistry), Sri Venkateshwar College, DU		
Experience	3 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	ACM0002, AMS.I.D., AMS.I.A, AMS.III.AV, AMS.II.G		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2 & TA 3.1)		
Reviewed by	Shreya Garg	Date	14/09/2018
Approved by	Anshika Gupta	Date	14/09/2018

Competence Statement	
Name	Shreya Garg
Country	India
Education	M.Sc. (Climate Science & Policy), TERI University
Experience	6 Years +
Field	Climate Change
Approved Roles	
Team Leader	YES
Validator	YES
Verifier	YES
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., ACM0002, ACM0012
Local expert	YES (India)
Financial Expert	NO
Technical Reviewer	YES

TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Abhishek Mahawar	Date	01/03/2018
Approved by	Ashok Gautam	Date	01/03/2018

Competence Statement			
Name	Kaviraj Singh		
Country	India		
Education	Ph.D. (Environmental Engineering), IIT Delhi Masters (Energy & Environmental), DAVV Indore		
Experience	15 Years +		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-II.D., ACM0006, AMS-I.A., AMS-I.C., AMS-II.B., AMS-III.H, ACM0002, ACM0001, AM0080		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1, TA 13.2)		
Reviewed by	Abhishek Mahawar	Date	26/09/2019
Approved by	Ashok Gautam	Date	26/09/2019

Competence Statement			
Name	Ashok Gautam		
Country	India		
Education	M. Sc. (Environmental Sciences) M. Tech. (Energy & Environmental Management)		
Experience	16 Years +		
Field	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-I.E, AMS-II.D., AMS-II.G., AMS-III.E., AMS-III.H., AMS-III.Q, AMS-III.Z., AMS-III.AV., AM0029, AM0025, AM0056, ACM0001, ACM0002, ACM0004, ACM0012, ACM0006, AM0018, ACM0009, AM0034, AMS.I.B		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1)		
Reviewed by	Shreya Garg	Date	25/01/2019

Approved by	Anshika Gupta	Date	25/01/2019
-------------	---------------	------	------------

Competence Statement			
Name	Shifali Guleria		
Education	M.Sc. (Environmental Studies and Resource Management), TERI University		
Experience	1+ year		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	NO		
Local expert	YES		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert	YES (1.2, 3.1)		
Reviewed by	Shreya Garg (Quality Manager)	Date	24/09/2019
Approved by	Anshika Gupta (Technical Manager)	Date	25/09/2019

Competence Statement			
Name	Sanjeev Kumar		
Country	India		
Education	B. Tech. (Chemical Engineering) M.Tech. (Energy Management)		
Experience	13.5 years +		
Field	Climate Change, Environment, Energy		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	YES (ACM0002, ACM0006, ACM0004, ACM0009, ACM0012, ACM0001, AMS I.D, AMS I.F, AMS I.C, AMS I.A, AMS II.D, AMS II.E, AMS III.H, AM0009, AM0013, AM0025, AM0056, AM0028, AM0029, AM0008)		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.1, TA 1.2, 4.1, 13.1)		
Reviewed by	Shreya Garg	Date	13/12/2018
Approved by	Anshika Gupta	Date	13/12/2018

Appendix 3. Documents reviewed or referenced

No	Author	Title	References to the document	Provider
01	UNFCCC	Standard: CDM PS for PA	Ver. 2.0	Others
02	UNFCCC	Standard: CDM PCP for PA	Ver. 2.0	Others
03	UNFCCC	Standard: CDM VVS for PA	Ver. 2.0	Others
04	UNFCCC	Form: CDM-MR-FORM	Ver. 7.0	Others
05	PP	Revised PDD (Final)	Ver. 15 Dated 29/08/2019	PP
06	PP	Monitoring Report (Final) for MP 5 10/03/2017 – 09/03/2018	Version 4.0 Dated 17/01/2020	PP
07	PP	Registered ER Spreadsheet	-	PP
08	PP	ER Spreadsheet (revised/final)	-	PP
09	PP	a) Registered PDD b) Registered PDD with PRC	Ver. 4.0, 06/09/2007 Ver. 9.0, 30/01/2014	Others
10	DOE	a) Validation Report (Registered PDD Version 4.0) by SGS b) Validation Report for PRC (Revised PDD Version 9.0) by DNV	30/07/2007 27/05/2014	Others
11	UNFCCC	Methodology: AM0025: “Avoided emissions from organic waste through alternative waste treatment process”	Ver. 6	Others
12	UNFCCC	Form: CDM-PDD-FORM	Ver. 11.0	Others
13	UNFCCC	UNFCCC Project Page for the project activity (UN 1254): http://cdm.unfccc.int/Projects/DB/SGS-UKL1185291186.52/view	-	Others
14	IPCC	IPCC 2006 defaults Volume 2 (https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/5_Volume5/V5_2_Ch2_Waste_Data.pdf) , Volume 5 (https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/5_Volume5/V5_5_Ch5_IOB.pdf)	Last viewed on 24/01/2020	Others
15	UNFCCC	RFI queries received from UN	2019	Others

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

Table 1. CLs from this validation

CL ID	01	Section no.	D.2., D.6.	Date : 18/09/2019
Description of CL				
As per para 230 of PS for PA version 2.0. The PP shall determine whether the actual or proposed changes are temporary deviations or permanent changes, and whether they require approval by the Board. Also, if permanent changes are proposed, please mention the type of permanent change.				
Project participant response				Date : 23/09/2019
<ol style="list-style-type: none"> 1. Proposed change 1: Factor FCFi had been fixed ex-ante in PDD. However, as per methodology, the parameter has to be monitored. Therefore, there is a permanent change proposed in the PDD wherein this parameter will now be monitored. Also, a temporary deviation is proposed for the period 10th March 2017 to 31st March 2020 wherein PP will use IPCC values of the factor FCFi. This change is not subject to approval by the Board. 2. Proposed change 2: Factor EFi was being used in the calculation of CERs but was not listed in the PDD. Therefore, a permanent change has been proposed wherein this factor has been added to the PDD. This change is not subject to approval by the Board. 				
Documentation provided by project participant				
Revised PDD				
DOE assessment				Date: 11/10/2019
The validation of post registration changes concluded that the type of changes proposed in the revised PDD are both temporary and permanent in nature and can be categorized under Appendix 1 of CDM PS and hence does not require prior approval by the CDM EB as per procedures. Thus, the CL stands closed.				

Table 2. CARs from this validation

CAR ID	02	Section no.	D.1.	Date : 18/09/2019
Description of CAR				
PP shall use the latest template available on UNFCCC website to prepare the revised PDD.				
Project participant response				Date : 23/09/2019
PP has revised the PDD as per the latest template (version 11) available on UNFCCC website.				
Documentation provided by project participant				
Revised PDD				
DOE assessment				Date: 11/10/2019
PP has provided the revised PDD in the latest template version 11.0. Thus, the CAR stands closed.				

CAR ID	03	Section no.	D.2., D.6.	Date : 18/09/2019
Description of CAR				
<ol style="list-style-type: none"> 1. The parameter EFi has been listed as ex-ante parameter, however as per the applied methodology the parameter shall be monitored annually. 2. PP has applied IPCC default to determine the value of the parameter EFi. The applied methodology page 23 states "IPCC default values should be used only when country or project specific data are not available or difficult to obtain." PP shall justify the applied value. 				
Project participant response				Date : 23/09/2019

1. EFi has been moved to monitored parameters.
2. Upon searching online, the country or project specific data for EFi could not be found. Hence, it is proposed to use IPCC default factor.

Documentation provided by project participant

Revised PDD

DOE assessment**Date:** 11/10/2019

1. The parameter now listed as monitored parameter which is in line with the applied methodology.
2. In absence of any data available to procure the value of the parameter, the PP has applied the last method i.e, the IPCC defaults to determine the value of the parameter. The approach in line with the applied methodology.

Thus, the CAR stands closed.

Table 3. FARs from this validation

FAR ID	xx	Section no.	-	Date: DD/MM/YYYY
Description of FAR				
-				
Project participant response				Date: DD/MM/YYYY
-				
Documentation provided by project participant				
-				
DOE assessment				Date: DD/MM/YYYY
-				

- - - - -

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN); • Make editorial improvements.
02.0	31 October 2017	Revision to align with the requirements in the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory		
Document Type: Form		
Business Function: Registration		
Keywords: post-registration change, project activities, validation report		