


Project information	
Title	Impact Carbon Global Safe Water Programme of Activities (PoA)
UN number	9948 MP4B3
Validation/Verification contract number of Earthood	CDM.VER.20.56
Monitoring period	01/01/2020 – 21/03/2020 (both days inclusive) Monitoring Period #: Fourth Monitoring Report #: Third (Batch)
Assessment team	Team Leader: Deepika Mahala (Contact Number +91 99531 62109) Technical Expert: Deepika Mahala Methodology Expert: Deepika Mahala Verifier: Vaishali Vatsa Local Expert: Kumden Nanbal Luka
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Managing Director Name, Signature & Date	 Dr. Kaviraj Singh 20/05/2021

Issues from CDM EB	CME responses	Response from Earthood
<p>1) Refer to paragraph: VVS-PoA, version 2, paragraph 340 (a)</p> <p>The baseline water source is not</p>	<p>The “Piped Water” cited as the application in Section A.3 of the CPA-DDs for UltraFLO Chlorination systems refers to pressurized piped water connection that is a pre-requisite for UltraFLO systems by virtue of its design. Thus, UltraFLO systems can only be installed on piped applications.</p> <p>In the emission reduction spreadsheet, tab “MP4 Sales Database” column Q has been added that indicates the primary water source from where the water is extracted in a given school. In the case of UltraFLO WPS, primary water sources like the surface water, well/Borehole, rainwater etc. have a piping</p>	<p>UltraFLO systems are fixed type of water purification units and can only be installed when water is being procured through a piped connection. This WPS can work only when it is mounted on a piped connection and water flows through them.</p> <p>Hence, the CPA DDs (section A.3.) and monitoring report (section C.1) correctly</p>

<p>mentioned in the monitoring report or emission reduction sheet – The included CPA-DDs (section A.3) and the monitoring report section C.1) mentions that UltraFlo Water Purification System will be fixed and applicable for piped water while UltraTab WPS is portable in nature and applicable for un-piped water. However, it is not clear from verification report how the DOE confirmed whether the implementation of the WPS is in accordance with the description provided in the included CPA-DDs and whether the installed WPS is compatible with the available water source.</p>	<p>connection installed to transport water from these primary sources to the point of installation of UltraFLO device.</p> <p>Please note that schools having Primary Water Source marked as “Piped” in Column Q, refers to only City Council / Government / Municipal Water Piped Connection in the school as the Primary Water Source.</p> <p>For further detail, please refer to the table below:</p> <table data-bbox="451 495 1318 1295"> <tr> <th>Source of Water</th><th># UltraFLO Schools</th><th>Comments</th></tr> <tr> <td>Well/Borehole</td><td>5,959</td><td>These wells/boreholes are connected to drinking water storage tanks via pipes. The water is pumped from wells/boreholes to these water storage tanks. The UltraFLO WPS is fitted in the tanks at the inlet to ensure that any water flowing in the tank is treated and rendered safe for drinking. The outlet of the tank is connected to the taps to facilitate the drinking of water by the school students and staff.</td></tr> <tr> <td>Surface Water</td><td>1</td><td>There is a private piped connection used for transporting water from the nearest surface water body source like a nearby pond, canal etc. to the drinking water storage tank in the school premises. UltraFLO systems are fitted onto these piping connections same as that explained above.</td></tr> <tr> <td>Trucked Water</td><td>1</td><td>The trucked water is collected in a sump from where it is pumped, or otherwise, directly pumped to the drinking water storage tank, to which</td></tr> </table>	Source of Water	# UltraFLO Schools	Comments	Well/Borehole	5,959	These wells/boreholes are connected to drinking water storage tanks via pipes. The water is pumped from wells/boreholes to these water storage tanks. The UltraFLO WPS is fitted in the tanks at the inlet to ensure that any water flowing in the tank is treated and rendered safe for drinking. The outlet of the tank is connected to the taps to facilitate the drinking of water by the school students and staff.	Surface Water	1	There is a private piped connection used for transporting water from the nearest surface water body source like a nearby pond, canal etc. to the drinking water storage tank in the school premises. UltraFLO systems are fitted onto these piping connections same as that explained above.	Trucked Water	1	The trucked water is collected in a sump from where it is pumped, or otherwise, directly pumped to the drinking water storage tank, to which	<p>mention that UltraFLO is fixed type systems and applicable on piped water.</p> <p>The ER sheet, worksheet titled ‘MP4 sales database’, column Q ‘source’ lists the source as surface water, wells etc. besides piped water. The term “piped” water under this column has been used for the schools which receive water from City Council / Government / Municipal Water Connections.</p> <p>It shall be noted that water is transported from primary water sources such as wells, surface water and boreholes through pipes to drinking water storage tanks in the project schools where fixed Ultra-FLO systems are installed on these pipes.</p> <p>In the absence of a pipeline connection to the drinking water storage tanks, UltraTABs are provided to the schools, UltraTAB being designed for non-piped applications. The UltraTAB pack consists of 10 strips of 10 tablets each, wherein the tablets are directly put in a drinking water storage tank (@one tablet per 100L of water), feasible for un-piped applications. In the case of UltraTAB, the schools which have “Piped” Connections in column Q, pertains to cases where although water is available from government piped network (like municipal water supply tap) but is not connected to the drinking water storage tank(s). Thus, in such cases, the drinking water storage tank</p>
Source of Water	# UltraFLO Schools	Comments												
Well/Borehole	5,959	These wells/boreholes are connected to drinking water storage tanks via pipes. The water is pumped from wells/boreholes to these water storage tanks. The UltraFLO WPS is fitted in the tanks at the inlet to ensure that any water flowing in the tank is treated and rendered safe for drinking. The outlet of the tank is connected to the taps to facilitate the drinking of water by the school students and staff.												
Surface Water	1	There is a private piped connection used for transporting water from the nearest surface water body source like a nearby pond, canal etc. to the drinking water storage tank in the school premises. UltraFLO systems are fitted onto these piping connections same as that explained above.												
Trucked Water	1	The trucked water is collected in a sump from where it is pumped, or otherwise, directly pumped to the drinking water storage tank, to which												

			the UltraFLO systems are fitted, same as that explained above.		<p>remains un-piped making the schools fit only for UltraTAB units.</p> <p>This has been verified by the verification team during the on-site visit during the previous monitoring periods. This was also checked by the verification team during the remote audit in the current monitoring period. For MP4, the DOE's audit samples included 5 UltraFLO school connected via pipe to source "Well/Borehole". In these samples the verification team was able to verify the school to have operational UltraFLO systems receiving water from the quoted primary water source and connected via pipes to the drinking water storage tank(s).</p> <p>Similarly, the verification team was able to verify for one UltraTAB school sample, having an operational UltraTAB system to be receiving water from the quoted primary water source which was not directly connected with the drinking water storage tank(s) and making the schools suitable only for UltraTABs system.</p> <p>During the remote site visit conducted for the current issuance request as well as during the physical site-visit conducted for previous batches, it was clearly noted by the verification team that UltraFLO has only been installed on pipeline connections, even when the primary water source is different from City Council / Government /</p>
	Others	65	Similar to above, these schools have a combination of aforesaid water sources (wells, surface water or rainwater sump), depending on the ease of access to the school to which UltraFLO WPS are connected as explained above.		

On the other hand, UltraTAB systems can only be installed in case of un-piped applications. UltraTABs by virtue of its design can only cater to cases where the drinking water storage tank(s) is not connected to the primary water source via pipes. The UltraTABs are directly administered in the "un-piped" drinking water storage tank(s) @ 1 tablet per 100 litres of water. Thus, although some of the schools may have "Piped" Connections in column Q for UltraTABs, the drinking water storage tank is un-piped making the schools fit only for UltraTABs devices in such cases.

Therefore, both the project devices have been implemented in line with the description provided in the CPA-DD / MR.

		<p>Municipal water connection and UltraTABS are administered only in un-piped applications even when the schools may have a piped connection.</p> <p>Thus, the verification team confirms that the WPS has been implemented in line with the description contained in the included CPA DDs.</p> <p>Section E.3.1. of the VCR was revised to present this information more clearly.</p>
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Issues from CDM EB	CME responses	Response from Earthood
<p>2) Refer to paragraph: Paragraph 15 of AMS-III.AV version 4 and VVS-PoA, version 2, paragraph 344</p> <p>The DOE is requested to clarify how it has verified the compliance of the monitoring plan with the applied methodology, in particular for the monitoring frequency of the parameter 'Operational units'. Noting that included CPA-DDs states that the monitoring frequency for the parameter as 'At least once per verification or biennially as per the monitoring requirements in the methodology', while as per the applied methodology it</p>	<p>CME would like to clarify that the term "at least" is deemed binding to both "once per verification" as well as "biennially as per the monitoring requirements in the methodology" and not to "once per verification" alone. Thus, under no circumstances, the monitoring frequency will extend beyond two years and shall remain compliant with the monitoring methodology requirement always. Further, please refer to the PoA validation report, CAR 07, page 80 of 106 which states the following:</p> <p><i>"The PP revised the monitoring frequency to be "At least once per verification or biennially as per the monitoring requirements in the methodology" to ensure that the methodological requirements are met (at least biennial) and that each verification is based on relevant monitoring results."</i></p> <p>Thus, this substantiates that "at least once per verification" was provisioned in the PoA-DD to prohibit the CME apply the value established in a given MP to the</p>	<p>The applied methodology AMS-III.AV. version 4.0, para 15, states that "Monitoring shall consist of checking of all appliances or a representative sample thereof, at least once every two years (biennial) to ensure that they are still operating or are replaced by an equivalent in service appliance".</p> <p>The CPA DDs mention under section B.5.1., that for the parameter 'Operational Units', the frequency is 'at least once per verification or biennially as per the monitoring requirements in the methodology'. For the current issuance request, the frequency required by the applied methodology has been met.</p> <p>As explained by CME and confirmed by the verification team, in all the previous monitoring periods, the monitoring frequency followed is found to be adhering to the methodology requirements.</p>

<p>should be 'at least once every two years'.</p>	<p>following MP (without monitoring it again) for cases where the combined length of two consecutive MPs is less than two years.</p> <p>Please refer to all previous monitoring periods for different batches where dedicated monitoring for each monitoring period has been conducted despite them being even less than one year duration. For example, the monitoring in MP3 was conducted in Jan-Feb 2020 and the monitoring in MP4 was conducted in Aug 2020 whereas the combined duration of these two monitoring periods is less than one year.</p> <p>Also, for the first monitoring period, although the monitoring period was longer than 2 years (30/05/2014 – 22/05/2017) and was covered under single verification, the CME did not claim any ERs for the period 30/05/2014 – 21/05/2015 and followed the “at least biennially” monitoring frequency to ensure that methodology prevails over such cases.</p> <p>Hence, the CME affirms that in no case the methodology requirements with respect to monitoring frequency would be compromised.</p>	<p>Further, the verification team also assessed the PoA validation report CAR 07, page 80 of 106 which confirms that “at least once per verification” is superseded by “biennial” and the methodology requirements prevails.</p> <p>Based on the above, the monitoring frequency stated in the monitoring plan is deemed in compliance with the monitoring methodology.</p> <p>However, to ensure that under no circumstances, the methodology requirement is compromised in future, FAR#01 has been raised to ensure that the monitoring frequency of parameter “operational units”, shall be at least biennial in line with monitoring methodology requirements.</p> <p>Section E.3.4.2. of the VCR has been revised to include information about this issue.</p>
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Issues from CDM EB	CME responses	Response from Earthood
<p>3) Refer to paragraph: VVS-PoA ver. 02 Paragraph 304 (c)</p> <p>The DOE cross-verified continuous availability of safe drinking water based on the interviews with the</p>	<p>a) The capacity of 340,000 L/unit (for UltraFLO) and 10,000 L/unit (for UltraTAB) stated in worksheet “Assumptions” is consistent with the latest version of registered CPAs 43-77 CPA-DDs page 5 and has already been validated during CPA inclusion, based on manufacturer technical specifications, as mentioned in the CPA inclusion validation report (Appendix 3, item /05/).</p>	<p>ER spreadsheet:</p> <p>a) The WPS capacity is found correctly stated in ER sheet ('Assumptions' tab, D9:D10) for UltraTab and UltraFLO as verified from the CPA DDs (section A.3.). Moreover, it was cross-checked with the manufacturer's technical specifications viz:</p>

<p>users and delivery notes, and further confirmed that the subsequent supplies are reported in the emission reduction spreadsheet. However, it is observed in the emission reduction spreadsheet that:</p> <p>a) There is no verification opinion on the implemented water purifier capacities (Tab "Assumptions" cells D9 and D10) of 10,000 L/unit (for UltraTab WPS) and 340,000 L/unit (for UltraFlo WPS);</p> <p>b) The residual capacity (i.e. Tab</p>	<p>The technical specification documents have also been cross verified by the verification Team as listed in the verification report (Appendix 3, item /28/).</p> <p>b) For MP4, the 'system's residual capacity from previous monitoring period' (MP4 Sales Database, column AB) has</p>	<ol style="list-style-type: none"> I. Technical specification / expiry of UltraFlo issued by Medentech (technology supplier) II. Technical specification / expiry of UltraTAB issued by Medentech (technology supplier) III. The UltraTAB strip clearly mentions the treatment capacity of 1 tablet as 100 litres and the UltraTAB pack is standardized at 10 strips of 10 tablets each, rendering the capacity of UltraTAB pack as 10,000 litres (verified physically during previous site visits as well as UltraTAB photos). IV. UltraFLO cartridges are manufactured in a standardized size as per the dimensions specified in the CPA-DDs and MR (verified physically during previous site visits as well as UltraFLO dimension declaration by CME) and pertain to the specifications issued by Medentech. V. The expiry of the UltraFlo/UltraTAB was also found mentioned on the cartridge / tab pack respectively as 5 years (photographs of UltraFlo and UltraTAB units) <p>The cross-verification against aforesaid documents have been reported under serial no. 28, appendix 3 of certification and verification report. Thus, it was accepted by the verification team.</p>
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<p>"Sales Database" column AA) data is not traceable. The residual capacities from MP3 (i.e. column AA of tab "Sales Database") are given without any elaboration by CME. The DOE in its verification report did not provide a verification opinion on how these values are derived, and whether the residual capacity is an assumed capacity or an actual remaining capacity considering the actual volume and quality of raw water purified at CPA locations;</p>	<p>been sourced from "MP3 Sales Database" submitted to UNFCCC as part of MP3 ER calculator (https://cdm.unfccc.int/PoAIssuance/iss_db/poaiss995886785/view).</p> <p>The CME extracted the above information from MP3 ER calculator (tab Sales Database, Column AL) by applying the "vlookup" function, using Institution SF ID as a unique identifier, to call this information in MP4 ER calculator, tab: MP4 Sales Database, column AB. Given the "vlookup" function does not work externally, hence the CME had to remove the external links in the MP4 Sales Database, column AB, which otherwise would have returned #Ref error in excel, once shared with DoE / UNFCCC.</p> <p>The CME has now presented MP3 Sales database under tab 'MP3 Sales Data reference only' in the revised MP4 ER calculator being submitted. The column AB of 'MP4 Sales database' has now been linked with column AL of 'MP3 Sales Data reference only' to establish full traceability of values for 'residual capacity from the previous MP'. For systems that are newly installed in MP4, and don't have any residual capacity being carry forwarded from MP3, column AB in tab 'MP4 Sales Database' now indicates, "new installation, not applicable" to avoid any confusion.</p>	<p>b) The DOE checked the revised ER sheet and confirmed that the values of 'residual capacity from previous MP' in MP4 ER spreadsheet (tab: "MP4 Sales data, column AB) were correctly calculated after cross-checking with MP3 ER calculator, the verification team further confirms the following:</p> <p>In the revised MP4 ER Calculator, the MP3 Sales database has been added (Tab: 'MP3 Sales data – reference only') by the CME. The verification team has verified that information in the revised ER Calculator, Tab: 'MP3 Sales data reference only' is fully consistent with the tab: 'Sales database' in the MP3, ER calculator available at UN webpage(https://cdm.unfccc.int/PoAIssuance/iss_db/poaiss995886785/view).</p> <p>Further, in the revised ER calculator, tab 'MP4 Sales database' column AB, the residual capacity from the previous MP is correctly linked with 'MP3 Sales data reference only', column AL, thus establishing complete traceability.</p> <p>The verification team has independently checked MP3 ER calculator from PoA page (9948-MP3-IRP2) and cross-verified the information in the revised ER Calculator, Tab: 'MP3 Sales data – reference only' and found it to be consistent.</p>
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<p>c) The residual capacity of some purification devices indicates system continuous running until year 2073 or more (e.g. cell 'A114627' of tab 'Sales Database'), which is even beyond the device lifespan as described (i.e. 5 years) in page 15 of the monitoring report;</p>	<p>c) The “system’s continuous running end date” was not depicting the lifetime/lifespan of the device. It was merely a determinant to check the compliance with the following requirement of the registered monitoring plan: <i>($N_{y,i} * R_{y,i}$) should not exceed the maximum output capacity of the system installed.</i></p> <p>The ER sheet tab, ‘MP4 Sales Database’ has been revised to determine the aforesaid in a better manner (refer column AM:AN). The revised functionality in the ER model ensures that ($N_{y,i} * R_{y,i}$) * operational school days in the monitoring period, does not exceed the available treatment capacity for any school and the total consumed capacity (column AM) is lower of the two as a conservative measure. Please refer below:</p> <ol style="list-style-type: none"> 1. The treatment capacity of a unit (column AH) is the sum of residual capacity from the previous MP, if any, (column AB) and the supplies made during the monitoring period (column AC). For newly installed systems, it has been calculated as the system’s initial installation capacity (assumptions D9:D10) and the supplies made during the monitoring period (column AC), if any. 	<p>In the revised ER calculator, ‘MP4 sales database’, column AB, for all systems newly installed, the ‘residual capacity from the previous MP’ is also found to be correctly specified as “new installation, not applicable”.</p> <p>Thus, ‘residual capacity from the previous MP’ is confirmed to be calculated correctly in column AB of MP4 Sales database for all schools.</p> <p>c) The continuous running end date was merely a determinant to check compliance with the registered monitoring plan requirement and is not linked with lifetime of the installed devices. The same has been removed by the CME from the revised ER sheet to avoid any confusion.</p> <p>The revised ER sheet tab, ‘MP4 Sales Database’ now ensures that ($N_{y,i} * R_{y,i}$) * operational school days in the monitoring period, do not exceed the available treatment capacity for any school (column AH). It also confirms that the total consumed capacity (column AM) remains lower of the two in all cases.</p> <p>The total consumed capacity during the monitoring period (column AM), residual capacity at the end of MP (column AN) and credited operational school days (column AO) have been correctly and conservatively calculated.</p>
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	<ol style="list-style-type: none"> 2. The total consumption of drinking water per day per unit has been calculated (column AG) and represents ($N_{y,i} * R_{y,i}$). 3. The start date of the WPS crediting (column AJ) in the monitoring period is considered as the latest of the start date of MP4 or the first day of the next month of its installation (column F). 4. The end date of WPS crediting (column AK) in the monitoring period is the earliest of the end date of the monitoring period or the system breakdown date (column AI), if any. 5. In case the treatment capacity of a unit (column AH) is 0, no CERs are claimed (given column AJ and AK are "NA", and column AP is "No"). 6. Subsequently, the total number of available operational school days (column AL), falling between the start date (column AJ) and end date (column AK) of crediting for a school, has been calculated weighted based on boarding and non-boarding population (column L:O). 7. If a WPS unit has treatment capacity (column AH) less than the capacity required to run the entire available operational days in the monitoring period (i.e. $N_{y,i} * R_{y,i} * \text{available operational days}$) the residual capacity at end of MP (column AN) is calculated as 0. Otherwise, the residual capacity is calculated as net of treatment capacity (column AH) and consumed capacity during the monitoring period (column AM). 8. Limited by the treatment capacity consumed during the monitoring period (column AM), the credited school days for each system is calculated (column AO). Hence, the credited school days (column AO) is always less than or equal to available operational school days (column AL) for a given school. <p>The above approach is deemed better as it removes the confusion related to "continuous running end date" as well as</p>	<p>The verification team has checked all determinants from column AJ:AP and confirms them to be correctly and accurately calculated and is conservative with respect to ER calculations.</p> <p>The revised achieved emission reductions in the current monitoring period have reduced since the last submission request, thus are confirmed to be conservative, accurate and credible.</p> <p>The verification team further confirmed that UltraFLO/UltraTAB expiry is 5 years. The first system was installed in April 2019 in Nigeria, thus no device will expire before the end of the current monitoring period.</p>
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<p>d) Out of the 17051 schools using either UltraFLO or UltraTAB in the CPAs, 16940 schools indicate zero continuous supplies during this monitoring period (i.e. column ‘AB’ of tab ‘Sales Database’).</p> <p>Taking into account the above, the DOE is requested to;</p> <p>1. Substantiate how it has verified and concluded the installed water purifier capacities of 10,000 L/unit (for UltraTab purifier) and 340,000 L/unit (for UltraFlo purifier);</p>	<p>calculates residual capacity at the end of MP4, based on operational school days during the monitoring period instead of the total duration of the monitoring period.</p> <p>Lastly, in the case of UltraFLO/UltraTAB, the expiry is 5 years with the earliest project device being installed in April 2019 hence no device shall end its lifetime before the end of the concerned monitoring period ending 21 Mar 2020. Besides, every-time a school receives a new supply of UltraFLO/UltraTAB, the lifetime of the system is automatically deemed renewed, the supplies being consumable.</p> <p>d) Please note that column AB in ‘MP4 Sales Database’ show a value of 0 if there is no residual capacity from the previous monitoring period and show “new installation, not applicable” in case of new installations in the concerned MP. Please refer the following in this regard:</p> <table><tr><th>Description</th><th>MP4 Sales Database</th></tr><tr><td>1) Schools with no residual capacity from the previous monitoring period</td><td>Select value “0” in column AB in MP4 Sales Database</td></tr><tr><td>2) Schools with no residual capacity from previous monitoring period and received no supplies during the current monitoring period</td><td>Simultaneously Select value “0” in column AC in MP4 Sales Database</td></tr><tr><td>3) Total number of cases identified</td><td>388</td></tr><tr><td>4) Operational days for these schools</td><td>0 (refer column AO, MP4 Sales Database)</td></tr></table>	Description	MP4 Sales Database	1) Schools with no residual capacity from the previous monitoring period	Select value “0” in column AB in MP4 Sales Database	2) Schools with no residual capacity from previous monitoring period and received no supplies during the current monitoring period	Simultaneously Select value “0” in column AC in MP4 Sales Database	3) Total number of cases identified	388	4) Operational days for these schools	0 (refer column AO, MP4 Sales Database)	<p>d) The subsequent supplies to any school are depicted under column AC of the worksheet titled “MP4 sales database”. If the residual capacity is high enough and sufficient for the concerned monitoring period, then no new supplies are required to be sent to the schools.</p> <p>The schools which have ‘0’ residual capacity from previous MP (column AB) along with 0 subsequent supplies (column AC), were verified to have 0 treatment capacity per unit (Column AH) and 0 credited operation days under column AO substantiating that no ERs have been claimed for such cases.</p> <p>For other systems, the credited operational days(column AO) have been correctly calculated as total treatment capacity consumed during the monitoring period (column AM) / per day water consumption (column AG). The verification team has verified all corresponding calculations and found them accurate and correct.</p>
Description	MP4 Sales Database											
1) Schools with no residual capacity from the previous monitoring period	Select value “0” in column AB in MP4 Sales Database											
2) Schools with no residual capacity from previous monitoring period and received no supplies during the current monitoring period	Simultaneously Select value “0” in column AC in MP4 Sales Database											
3) Total number of cases identified	388											
4) Operational days for these schools	0 (refer column AO, MP4 Sales Database)											

<p>2. Submit a traceable emission reduction spreadsheet for the calculation of the system residual capacities;</p> <p>3. Elaborate how a system's continuous running end date can be beyond its lifespan (5 years);</p> <p>4. Substantiate continuous availability of safe drinking water to schools considering some water purifiers had no residual capacity from the previous monitoring period and received no supplies during the current monitoring period.</p>	<p>Thus, for the schools in (3) above, the operational days have been calculated as 0 because there is no residual capacity from the previous MP, neither continuous supplies have been made to the school in the current monitoring period and hence no ERs have been accounted.</p> <p>On the other hand, "new installation, not applicable" cells in column AB in 'MP4 Sales Database' indicate that these systems are newly installed and did not have any residual capacity from the previous MP. This is verifiable against their installation dates. These systems provide continuous safe drinking water in the monitoring period by virtue of their initial installed capacity, even if no subsequent supplies have been made in these schools. Thus, the ER sheet is correctly ensuring that only those schools are credited that either have residual capacity from previous MP and/or, have received supplies and/or have been newly installed in the monitoring period.</p>	<p>Thus, it was confirmed that the CME has followed the implementation plan stated in the CPA DDs and claimed ERs only for the systems that are rendering clean water during the current monitoring period.</p> <p>Based on aforesaid and review of the following information/documents:</p> <ol style="list-style-type: none"> I. Capacity / lifespan specified in CPA-DDs / manufacturer specifications / photographs for Chlorination systems II. Revised MP4 ER calculator with traceable residual capacity from previous MP III. Conservative calculation of consumed capacity, residual days at the end of current MP and credited operational school days IV. Revised approach presented by CME to ensure $(N_{y,i} * R_{y,i})$ does not exceed the maximum output capacity of the system installed. <p>The verification team confirms that the capacity of the devices (installed actual capacity or residual capacity from the previous MP3, consumed capacity, residual capacity at the end of current MP4 and credited operational school days) has been correctly determined. The installed systems are capable of continuously supplying safe drinking water over the concerned monitoring period and ERs stated in the monitoring report and ER calculator are conservative, accurate, credible and</p>
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		<p>additional to any that would have occurred in the baseline.</p> <p>The verification and certification report section E.3.6., has been revised to include all the aforesaid changes regarding this issue.</p>
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Issues from CDM EB	CME responses	Response from Earthood
<p>4) Refer to paragraph: VVS-PoA, version 2, paragraph 359 (d)</p> <p>It is noted that the CME has used 365 days for school operation and DOE accepted this is in-line with the sample calculations shown in the registered PoA-DD (refer page 70) and CPA-DDs (refer ER calculation formulae) and it is not a ex-ante fixed or ex-post monitored parameter for applied methodology. However, given a fact that WPS installed at the schools will not service entire population round the year, how DOE verified the appropriateness of applying the entire days covered by the monitoring period for calculation of QPWy (Quantity of purified water for drinking during the year y). Further, the DOE should also check following clarifications issued by the Meth Panel in this regard.</p>	<p>The number of school days in ERs Summary tab (refer row 6), has been adjusted to correspond to only operational school days instead of complete duration of the monitoring period.</p> <p>As a conservative measure, now the school academic calendar, as issued by the Federal Ministry of Education, Nigeria has been used to determine the total available operational school days within the monitoring period weighted for non-boarding and boarding population for each school.</p> <p>Subsequently, the CME has considered weekdays (excluding weekends, public holidays, mid-term and end term holidays) for non-boarding users and considered days (including weekends and public holidays but excluding mid-term and end term holidays) for boarding users (as boarding students/staff will consume water during weekends and short public holidays) for determining the school days for which WPS should be credited. Please refer column AV:BC in "MP4 Sales Database" tab of</p>	<p>In the applied methodology / registered PoA-DD/CPA-DDs, CPAs do not have provision to account for school holidays. However, based on the UN request for review question and rationale behind the same, the CME has revised the ER calculations to account ERs only for operational school days (refer tab: MP4 Sales Database) instead of the monitoring period days, based on published and objectively verifiable government data (Academic school calendar).</p> <p>The school term duration and corresponding term holidays are found to be correctly calculated as per the submitted academic school calendars for the period 2019-2020 issued by Federal Ministry of Education, Nigeria. Further, the CME's approach of considering only weekdays and excluding all weekend days, holidays, mid-term / end term breaks for non-boarding schools is deemed appropriate.</p> <p>Also, the approach for boarding schools to include weekdays, weekends and short holidays but excluding mid-term, end-term breaks is deemed appropriate as boarding staff and students will be</p>

<p>a. SSC_795: https://cdm.unfccc.int/methodologies/SCmethodologies/clarifications/05721; and</p> <p>b. SSC_792: https://cdm.unfccc.int/methodologies/SCmethodologies/clarifications/57226</p>	<p>ER Calculator where the school calendar for the monitoring period, school holidays list and start date and end date of school term have been presented.</p> <p>The QPW_y value (row 8: ERs Summary tab) has been calculated accordingly considering credited school days in the monitoring period (row 6: ERs Summary tab).</p> <p>This results in a reduction of emission reduction to 128,917 tCO₂e from 188,133 tCO₂e earlier.</p>	<p>served by the WPS systems occur during weekends and short holidays.</p> <p>The calculation approach/rationale of calculating operational school days has been discussed in CL#05 and is found appropriate, accurate and conservative. The revised achieved emission reductions in the current monitoring period have reduced since the since the last submission request, due to revised approach.</p> <p>FAR#02 has been raised to ensure that QPW_y is based on operational school days in future verifications. Section E.3.4.2. of the VCR has been revised to include the revisions related to this issue.</p>
<p>ESPL would like to confirm that the responses to all the issues raised by CDM EB have led to a revision of MR, ER sheet and Verification and Certification Report (VCR). A tracked changed copy of MR and VCR (in addition to clean versions) is also submitted to easily identify these changes.</p> <p>In case of any further enquiry, the members of the assessment team and/or technical reviewer may please be contacted at the telephone numbers given above.</p> <p>We hope with the revised responses and revised set documents, the concerns raised by CDM EB are addressed to the best possible level.</p>		

Documents submitted:

1. Revised Monitoring Report 3.0 dated 26042021 (Clean and Changes Tracked)
2. Revised ER sheet version 3.0 dated 26042021
3. Revised verification Report version 4.0 dated 18/05/2021 (Clean and Changes Tracked)
4. Revised RFI Form (due to change in ERs)
5. Revised PRC validation report 4.0 dated 18/05/2021 (Clean and Changes Tracked)
6. Revised PRC Form (due to change in ERs)

Document information						
Version	Date	Description	Prepared by		Reviewed by	
			Name	Date	Name	Date
1.0	27/02/2014	Review and re-approval	Abhishek Mahawar	27/02/2014	Ashok Gautam	27/02/2014
0	13/01/2014	Initial adoption	Abhishek Mahawar	09/01/2014	Kaviraj Singh	13/01/2014