Project
RoU Verification
Report

2022

COVER PAGE

RoU Project Verification Report Form (VR)

BASIC INFORMATION	
Name of approved UWR Project Verifier / Reference No.	Enviance Services Private limited
Type of Accreditation	☒ RoU Accreditation UWR ☐ Water Audit/Water Footprint Expertise
Approved UWR RoU Scopes for Project Verification	RoU Scope 5: Conservation measures taken to recycle and/or reuse water, spent wash, wastewater etc. across or within specific industrial processes and systems, including wastewater recycled/ reused in a different process, but within the same site or location of the project activity. Recycled wastewater used in off-site landscaping, gardening or tree plantations/forests activity are also eligible under this Scope.
Validity of UWR approval of Verifier	30/09/2027
Completion date of this VR	29/01/2025
Title of the project activity	Wastewater Treatment Project By Tirupur Murugampalayam CETPCL
Project reference no. (as provided by UWR RoU Program under Approved for Verification tab)	UWR ID: 477
Name of Entity requesting verification service (can be Project Owners themselves or any Entity having authorization of Project Owners, example aggregator.)	Viviid Emissions Reductions Universal Pvt. Ltd. Name: Lokesh Jain Email ID – lokesh.jain@viviidgreen.com
Contact details of the representative of the Entity, requesting verification service (Focal Point assigned for all communications)	Viviid Emissions Reductions Universal Pvt. Ltd. Name: Lokesh Jain Email ID – lokesh.jain@viviidgreen.com
Country where project is located	India

Applied reference documents used for estimation (approved water data and reference guides under the UWR Rou Standard used)	Water Data Guide
Project Verification Criteria: Mandatory requirements to be assessed	☒ UWR Standard ☒ Applicable Approved Calculations ☒ Applicable Legal requirements /rules of host country ☒ Eligibility of the Project Type ☒ Start date of the Project activity ☒ Meet applicability conditions in the applied methodology ☒ Credible Water Data Sets ☒ Do No Harm Test ☒ RoU calculations ☒ PCNMR ☒ No Double Counting ☐ Others (please mention below)
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-no-harm criteria ☒ Social Safeguards Standard do-no-harm criteria
Project Verifier's Confirmation: The *UWR Project Verifier* has verified the UWR project activity and therefore confirms the following:	The UWR RoU Project Verifier [*Enviance Services Private Limited*], certifies the following with respect to the UWR Project Activity [*Wastewater Treatment Project By Tirupur Murugampalayam CETPCL*]. ☒ The Project Owner has correctly described the Project Activity in the PCNMR version 2.0 (dated *27/01/2025*) including the applicability of the guidance documents and water data as outlined in the UWR RoU Standard [*RoU Scope 5: Conservation measures taken to recycle and/or reuse water, spent wash, wastewater etc. across or within specific industrial processes and systems, including wastewater recycled/ reused in a different process, but within the same site or*

	location of the project activity. Recycled wastewater used in off-site landscaping, gardening or tree plantations/forests activity are also eligible under this Scope] and meets the applicability conditions and has achieved the estimated RoUs, complies with the monitoring methodology and has calculated RoU estimates correctly and conservatively. ☒ The Project Activity is likely to generate *59,49,077* RoUs as indicated in the PCNMR version 2.0, which are applicable with UWR rules ☒ The Project Activity is not likely to cause any net-harm to the environment and/or society ☒ The Project Activity complies with all the applicable UWR rules[1] and therefore recommends UWR Program to register the Project activity with RoUs.
Project Verification Report, reference number and date of approval	Verification Report UWR Project ID: 477 Date: 04/02/2025
Name of the authorised personnel of UWR Project Verifier and his/her signature with date	 Vidhya Murali Krishna Quality Manager

[1]https://a23e347601d72166dcd6-16da518ed3035d35cf0439f1cdf449c9.ssl.cf2.rackcdn.com//Documents/UWRtermsandconditionsVer6_171023134009203288.pdf

❖ PROJECT VERIFICATION REPORT

❖ Executive summary

The project activity is titled – "Wastewater Treatment Project By Tirupur Murugampalayam CETPCL". The project is located in Erankattu Thottam, Murugampalayam, Iduvampalayam (PO), District Tirupur, Tamil Nadu, India.

Company's Name	Plant Treatment Capacity (m^3/d)	Commissioning Date		Location	Geo co-ordinates of Location
TIRUPUR MURUGAMPALAYAM COMMON EFFLUENTS TREATMENT COMPANY PVT LTD	Installed capacity = 11,000 m^3/d (11 MLD) Operational capacity = 10,900 m^3/d (10.9 MLD)	ETP	05/08/2008	Erankattu Thottam, Murugampalayam, Iduvampalayam Dist: Tirupur, Tamil Nadu, India	11°04'28"N & 77°19'41"E

The project activity includes Murugampalayam CETP,Tirupur Murugampalayam Common Effluents Treatment Company Pvt. Ltd. Located at Erankattu Thottam, Murugampalayam, Iduvampalayam Dist: Tirupur, Tamil Nadu, India.

Tirupur is an industrial town located about 450 kms Southwest of the city of Chennai, Tamil Nadu State. Tirupur is famous as one of the top knitwear exports centers of India. There are about 700 plus dyeing & bleaching units in and around Tirupur who are engaged in the dyeing and bleaching operations of the yarn & fabric. Currently 50 dyeing industries are under this CETP. These units generate effluents, which are currently being subjected to primary treatment, RO, MEE, ZLD and reused in the dyeing process to respective member unit.

The Tirupur Murugampalayam CETP was commissioned on 05 Aug, 2008 with the capacity of 11MLD. Present Processing capacity 10.9MLD. Currently Murugampalayam has 50 Dyeing members with total CETP capacity of 11 MLD.

Murugampalayam Common Effluent Treatment Plant consists of 67 textile dyeing member units with 11 MLD capacity. The plant is designed to treat the effluent with complete biological oxidation process and reverse osmosis system.

The Tamil Nadu Pollution Control Board (TNPCB) has laid down specifications for the discharge of treated effluents into inland surface waters. One of the stipulations is that the TDS level has to be maintained below 2100 ppm in the discharge after treatment apart from the stipulations for other parameters. The TDS of the effluents discharged presently is higher than this limit. Therefore as a measure of pollution abatement the TNPCB has now mandated the industries to implement zero discharge facilities so that the pollution from the dyeing & bleaching units can be contained once and for

all. Six new CETP's namely, Arulpuram, Rayapuram, Kallikadu, Murugampalayam Rayapuram, Mangalam and Eastern have joined together to form a Special Purpose Vehicles to implement the zero discharge facility. The SPV's are Noyyal Common Effluent Treatment Company Limited and Mangalam-Eastern Water Recycling Company Limited. The six CETP's, have mandated the Tamilnadu Water Investment Company Limited, Chennai (TWICL) for the implementation of the zero discharge facilities.

The Project Proponent (PP) affirms that they meet all the requirements outlined in the management plan regarding ownership, legal rights, permits, and cost details for the successful implementation of the project. Specifically.

Water User Rights: The PP holds the necessary water user rights for the area within the project's boundary. These rights are legally secured and ensure that the PP has full entitlement to use the water resources required for the project's operations.

Legal Land Title: The PP holds an uncontested legal land title for the entire project area within the project's boundary. The title is fully documented and free of any disputes, confirming the PP's legal right to utilize the land for project purposes.

Necessary Permits: The PP has obtained all the required permits for the implementation of the project. In cases where certain permits are pending, the PP has already applied for the necessary approval and is working in full compliance with the relevant regulatory requirements to ensure the timely commencement of the project.

Cost Details: The PP has thoroughly assessed and documented the cost details for project implementation. A detailed cost breakdown is available in the DPR, Capital Cost of project was RS. 69.94 Crores. covering all aspects of project development, including infrastructure, permits, equipment, and operational costs.

Nowadays, the treatment of water occupies a predominant place in modern industries. Moreover, treatment of water is required for various purposes, from portable use to industrial applications such as food, beverages, leather, textiles and heavy chemical industries. Also, the treatment of wastewater especially effluent from toxic disposals attracts attention nowadays due to increase global awareness of ecological & environmental protection.

Treatment of water implicitly means changing its physical & mainly its chemical properties by removing undesirable suspended & dissolved impurities of both organic & inorganic nature. The level of chemical dosing involved, and method adopted for treatment are according to the end consumers requirement as well as the nature of composition of raw water sources, which are all mainly from surface wells, lakes, rivers or from underground sources such as deep wells in some places from sea.

If the wastewater is released into the environment without proper treatment, it can cause severe pollution, affecting aquatic life, soil quality, and human health.

Therefore, this project activity helps reduce the environmental impact by treating wastewater and recirculating it back to the textile industries which minimizes their dependency on fresh water sources, further promoting sustainability.

The project activity qualifies under the UCR RoU program since the PP has undertaken water conservation measures to recycle and reuse Industrial wastewater. Industrial Wastewater is a highly

potential source of water for various purposes and is highly underutilized in the country. All the water quality reports are in line with the Tamil Nadu Pollution Control Board (TPCB).
The current monitoring period is from 01/01/2014 to 31/12/2023 and the RoU's generated by the project activity in this monitoring period are 59,49,077 RoU's.

Scope of Verification

The scope of the services for the project is to perform Project Verification of concerned Project Activity. The scope of verification is to assess the claims and assumptions made in the Project Concept Note & Monitoring Report (PCNMR) against the UWR criteria, including but not limited to, UWR program verification guidance document, UWR Standard, UWR Program Manual, and related rules and guidelines established under Program process.

Verification Process and Methodology

The verification process was undertaken by a competent verification team and involved the following,

- Desk review of documents and evidence submitted in context of the reference rules and guidelines issued by UWR,
- Undertaking/conducting site visit/remote audit, interview or interactions with the representative of the project owners/representatives,
- Reporting audit findings with respect to clarifications and non-conformities and the closure of the findings, as appropriate and preparing a draft verification opinion based on the auditing findings and conclusions
- Finalization of the verification opinion (this report)

Desk/Document review

A detailed desk review of the PCNMR, Methodology and all other associated documentation and references took place in advance of the remote site visit, and additional documents that were not available for the desk review were requested for review during the remote site visit. Additional information can be required to complete the verification, which may be obtained from other public and reliable sources or through telephone and face to face interviews with key stakeholders (including the project developers and where necessary, government and NGO representatives in the host country).
A list of all documents reviewed or referred to in the course of this verification is included below in Appendix 3.

Follow up interviews/site visit

The verifier conducted remote audit and had requested for site photographs, short videos. A remote interview was conducted with the project owners and stakeholders.

Conclusion

Based on the work performed, the verifier concludes that in the project "Wastewater Treatment Project By Tirupur Murugampalayam CETPCL",the information and data presented in the PCNMR version 2.0 dated 27/01/2025 meets all relevant requirements of the UWR for UWR project activities.

For the current monitoring period, verified RoU's achieved by the project activity were as below;

Start date of monitoring period	01/01/2014
End date of monitoring period	31/12/2023
RoU's achieved	59,49,077 RoU's

❖ Project Verification team, technical reviewer and approver

Project Verification team

No.	Role	Last name	First name	Affiliation (e.g. name of central or other office of UWR Project Verifier or outsourced entity)	Involvement in		
					Document review	Off-Site inspection	Interviews
1.	Team Leader/ Technical Expert	Singh	Ritu	Enviance Services Private Limited	Yes	Yes	Yes
2.	V-V Trainee / Technical Expert in Trainee	Mahajan	Swati	Enviance Services Private Limited	Yes	Yes	Yes

Technical reviewer and approver of the Project Verification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of UWR Project Verifier or outsourced entity)
1.	Technical reviewer	Internal	Kumar	Pankaj	Enviance Services Private Limited

❖ Means of Project Verification

Desk/document review

❖ A detailed desk review of the PCNMR, methodology and all other associated documentation and references took place in advance of the remote audit, and additional documents that were not available for the desk review were requested for review during the remote audit. Additional information can be required to complete the verification, which may be obtained from other public and reliable sources or through telephone and face-to face interviews with key stakeholders (including the project developers and where necessary, Government and NGO representatives in the host country).

❖ A list of all documents reviewed or referred to in the course of this verification is included in Appendix 3 below.

Off-site inspection

Date of off-site inspection: 20/01/2025

No.	Activity performed Off-Site	Site location	Date
1.	a) An assessment of the implementation and operation of the project activity as per the PCNMR and UWR requirements b) Verification of the project design, as documented is sound and reasonable, and meets the identified criteria of UWR Standard Requirements and associated guidance c) Assessment to conformance with the certification criteria as laid out in the UWR Standards; d) Evaluation of the conformance with the certification scope, including the water project and baseline scenarios, additionality; scopes of water project; and the physical infrastructure, activities, technologies and processes of the water project to the requirementsof the UWR; e) Evaluation of the calculation of RoU's, including the correctness and transparency of formulae and factors used; assumptions related to estimating RoU's. f) Review of information flows for generating, aggregating and reporting of the parameters to bemonitored g) To confirm that the operational and data collection procedures can be implemented in	Erankattu Thottam, Murugampalayam, Iduvamplayam (PO) Tirupur, Tamil Nadu, India.	20/01/2025

	accordancewith the Monitoring Plan h) Cross-check of information provided in the submitted documents and data from other sources available at site i) Review of calculations and assumptions made in determining RoU's, and an identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters j) Interviews of local Stakeholders		

Interviews

No.	Interview			Date	subject
	Last name	First name	Affiliation		
1.	Madeswaran	B.A.	Tirupur Murugamplayam Common Effluents Treatment Company Pvt. Ltd.	20/01/2025	Project Implementation, Monitoring plan, Project Boundary, Eligibility criteria, Host country requirements, RoU calculations Project implementation, monitoring, Local stakeholder consultation
2.	Shanmugam	-			
4.	Mahanta	Sarashi	Viviid emissions reductions universal private Ltd		
5.	Mehta	Agrah			
6.	Logaraj	P.	Local stakeholders		
7.	Subbulaxmi	R.			
8.	Arun	P.			
9.	Gunasekar	N.			
10.	Kumar	S.			

Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised

Areas of Project Verification findings	No. of CL	No. of CAR	No. of FAR
Rainwater Offset Units or Water Credits (RoU)			
Identification and Eligibility of project type	-	-	-
General description of project activity	05	-	-
Application and selection of methodologies and standardized sets	-	-	-
- Application of RoU methodologies and standardized data sets	-	-	-
- Deviation from methodology and/or methodological tool	-	-	-
- Clarification on applicability of methodology, tool and/or standardized data sets	01	-	-
- Project boundary and unutilized water sources	-	-	-
- Likely scenario without RoU Project	-	-	-
- Estimation of RoUs	01	-	-
- PCNMR	-	-	-

Start date, crediting period and duration	-	-	-
Positive environmental impacts on water table and/or groundwater recharge and/or water security in the area	-	-	-
Project Owner- Identification and communication	-	-	-
Others (please specify) Positive social impacts	01	-	-
Total	08	-	-

❖ Project Verification findings

Identification and eligibility of project type (Approved Project Activities (Positive List))

Means of Project Verification	The project is an effluent treatment plant with installed treatment capacity of 11,000m^3/day (11 MLD) and operational capacity of 10,900 m^3/day (10.9 MLD). This is confirmed based on the commissioning certificate, operational capacity document and technical specifications. Since the project is a effluent treatment plant which recycles and reuses industrial wastewater it comes under scope 5 project as per UWR Rainwater (RoU) Standard, version 7.0 (https://a23e347601d72166dcd6-16da518ed3035d35cf0439f1cdf449c9.ssl.cf2.rackcdn.com//Documents/RainWaterOffsetStandardver7_130824144129526582.pdf) The Project owner has used valid PCNMR form available at the UWR website for the preparation of PCNMR for the current project activity. The project has prepared PCNMR in line with UWR guidance and requirements.
Findings	No findings raised
Conclusion	The UWR-approved format is used for description and the project meets the requirement of the UWR RoU verification standard version 2.0 and UWR RoU standard version 7.0. UWR project communication agreement was submitted to the verifier and the same has been verified. Methodology referenced and applied appropriately describing the project type. The eligibility of the project aggregator is verified using the UWR communication agreement, project correctly applies the verification standard, UWR project standard, and UWR regulations. The project activity is overall meeting the requirements of the UWR Verification standard and UWR project standard.

General description of project activity

<table>
<tr><td>Means of Project Verification</td><td>The project is an effluent treatment plant with installed treatment capacity of 11,000m^3/day (11 MLD) and operational capacity of 10,900 m^3/day (10.9 MLD) and its commissioning date is verified through the commissioning certificate of the project. The documents confirm the treatment of wastewater from the textile dyeing member units in this project.
Assessment team conducted documentation review of the PCNMR against the UWR RoU verification standard version 2.0 and UWR RoU standard version 7.0 and the UWR-PCNMR-FORM Version 3.0.
By checking the supporting documents, it is confirmed that the project is an effluent treatment plant, the project is located in Erankattu Thottam, Murugampalayam, Iduvamplayam (PO), District Tirupur, Tamil Nadu, India.
The approximate geo-coordinates of the project locations are mentioned below.
<table><tr><td>Plant Treatment Capacity (m^3/d)</td><td>Geo co-ordinates of Location</td></tr><tr><td>Installed capacity = 11,000 m^3/d
(1 MLD)

Operational capacity =10,900 m^3/d
(10.9 MLD)</td><td>11°04'28"N
&
77°19'41"E</td></tr></table>
Assessment team performed an offsite inspection of project and confirmed that the location described in the PCNMR are accurate.</td></tr>
<tr><td>Findings</td><td>CL 01, CL 02, CL 03, CL 04 and CL 05 were raised and closed successfully. More information presented appendix below.</td></tr>
<tr><td>Conclusion</td><td>The description of the project activity is verified to be true based on the review of PCNMR, Commissioning Certificate and other submitted documents.</td></tr>
</table>

Application and selection of water data and calculation parameters

Means of Project Verification	Verification criteria is as per the requirements of UWR RoU program for the scope – 5. For applicability mentioned in the PCNMR, commissioning certificates, DPR, technical specifications, flow meter data were checked.
Findings	No findings raised.
Conclusion	The project has effectively implemented the water treatment unit following the guidelines of UWR RoU standards by recycling and reusing the industrial wastewater and has a positive impact of local hydrology and community water resources.

Clarification on applicability of tool and/or RoU estimates

Means of Project Verification	The documents reviewed are ETP basics, ensuring proper operation of flow meters, RoU estimates by reviewing the flow details, UWR RoU standard, and UWR RoU Verification Standard.
Findings	CL 06 was raised and closed successfully. More information presented appendix below.
Conclusion	The verification team confirms that all the applicability criteria set by

	the UWR RoU standard are met. The relevant information against those criteria is also included in the PCNMR. The selected scope for the project activity is applicable.

Project boundary, sources and RoUs

Means of Project Verification	Conducting remote inspections of the project site to assess the effluent treatment plant setup and its integration with the Tirupur Murugampalayam Common Effluents Treatment Company Pvt. Ltd. Document Review: Examining the project's documentation, including permits, ownership documents, flow details.
Findings	No findings raised
Conclusion	The project boundary is correctly defined in the PCNMR. The CETP is the project boundary in this project which treats the industrial wastewater by enhancing the water conservation and sustainability of the local water reserves.

Baseline scenario of the water shed or activity prior to project commissioning

Means of Project Verification	As per the UWR scope 5 project the baseline scenario is as following: *"*The net quantity of treated ETP effluent / wastewater that would be discharged directly into the local drain/sewer without further being recycled and/or reused daily post treatment per year*"* Remote audit conducted and document review showed that in absence of the project activity, the waste water would have been directly discharged in the sewer without treating it and further contaminating the local water reserves.
Findings	No findings raised
Conclusion	The approved baseline methodology has been correctly applied to identify a realistic and credible baseline scenario, and the identified baseline scenario most reasonably represents what would occur in the absence of the proposed UWR project activity. All the assumption and data used by the project participants are listed in the PCNMR and/or supporting documents. All documentation relevant for establishing the baseline scenario are correctly quoted and interpreted in the PCNMR. Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable.

Implementation Benefits to Water Security

Means of Project Verification	Examining the PCNMR, commissioning certificate, legal documentation and any other relevant documentation. By conducting interviews with the project proponent, owners. By assessing the water quality reports, as well as the impact of untreated water on local water reserves and quality testing was conducted by analyzing the quality of water post treatment.
Findings	No findings raised.
Conclusion	The Implementation Benefits to Water Security emphasizes the significant positive impact in safeguarding aquatic ecosystem in Noyyal river and soil health. The project successfully significantly reduces the reliance on groundwater, a precious natural resource. By minimizing the demand for fresh water, Tirupur Murugampalayam

	Common Effluents Treatment Company Pvt. Ltd. can contribute to water conservation efforts and alleviate pressure on depleting aquifers. Overall, the project demonstrates effective strategies for reducing captive water consumption and responsibly managing groundwater, the project hopes to foster a broader adoption of environmentally responsible approaches within the industry.

❖ Estimation of RoUs or net water saved/recycled/reused

Means of Project Verification

Remote inspection of the ETP unit to ensure it matches the project documentation. Examination of PCNMR, Commissioning Certificate, Project plan was carried out and other relevant documentation provided by the project proponent. Measurement Verification was carried out by checking the flow details.

The net quantity of treated water used is measured via flow meters installed at the site. RoUs are calculated based on total quantity of treated water being recycled & reused.

RoU's achieved during the first monitoring period as per the Project Activity:

Year	Total ROUs (1000 liters)/yr UCR Cap(1 million RoUs/yr
2014	348145
2015	418409
2016	422718
2017	544451
2018	624345
2019	747032
2020	763509
2021	157181
2022	925068
2023	998218
Total RoUs	**5949077**

The project is an CETP plant means the water budget component is surface inflow. According to the RoU Standard version 7, PP has accounted 1% each as the uncertainty factor in inflow and outflow volumes to remain conservative. Therefore, an uncertainty factor of 0.98 is applied to all ROUs.

Findings

CL 07 was raised and closed successfully. More information presented appendix below.

Conclusion

In summary, the calculation of RoU's was correctly demonstrated by the PP.

It is confirmed by the assessment team that:

For the estimation of Rainwater Offset Units (RoUs) or net water saved/recycled/reused at Tirupur Murugampalayam Common Effluents Treatment Company Pvt. Ltd. CETP, would highlight the

	successful implementation of a project activity that has effectively treated the industrial wastewater. The quantification tools and calculations detailed in the document indicate a total of 59,49,077 RoUs (1000 liters each) were collected over the monitoring period from 01/01/2014 to 31/12/2023. This initiative not only treated a significant amount of wastewater that would have otherwise gone untreated but also contributed to the improvement of Noyyal river water quality, demonstrating the project's positive impact on water security and sustainability in the region. The project serves as a model for similar industrial areas, showcasing the benefits of treating wastewater in enhancing in safeguarding the water quality of local water reserves.

PCN+Monitoring Report

Means of Project Verification	Conducting off-site audit to verify the implementation and operation of the CETP. Examining all relevant documents, such as permits, ownership papers, and maintenance records of the CETP. Talking to the project proponent about the operation of the unit. Checking the accuracy of reported data, such as the flow details, flow meter details, treated water details and by evaluating the design and technical aspects of the CETP to ensure it aligns with the UWR RoU Standard principles.
Findings	No findings were raised.
Conclusion	The verification team is convinced of compliance of the monitoring plan. During the remote audit assessment, the verification team interviewed the PP that the monitoring arrangements described in the monitoring plan are feasible within the project design. The monitoring parameter reported in PCNMR adequately represents the parameters relevant to RoU calculation. The calibration report ensures the accuracy of the data reported. The number of RoU's generation is calculated based on this accurately reported data. The calculation was done using an excel sheet where all the parameters were reported. In the PCNMR RoU calculations are correctly calculated and reported. The PCNMR meets the requirements of UWR project verification requirements.

National Water Security Index

Means of Project Verification	As per UWR RoU standard version 7.0 all projects RoU methodology are ideally below the NWS score of 60 and NWSI equal or lower than 2 (NWSI ≤ 2). India's NWS score is below 60. This index is considered in establishing and implementing policies for sustainable water and groundwater development. As mentioned in the PCNMR, commissioning certificate and DPR this project is not a groundwater restoration project. It is an effluent treatment unit.
Findings	No findings raised
Conclusion	The verification team on assessment concluded that the project is an industrial wastewater recycle and reuse project and not a groundwater restoration project. Hence, national water security index is not applicable in this project.

Start date, crediting period and duration

Means of Project Verification	The start date and crediting period of project activity was checked

	based on the commissioning certificate, PCNMR and other documents provided.
Findings	No findings raised.
Conclusion	The project has chosen crediting period start date as 01/01/2014. The crediting period is chosen as 01/01/2014 to 31/12/2023.

Positive Environmental impacts

Means of Project Verification	PP has not claimed any separate positive environmental impact. The project being industrial wastewater treatment unit will reduce the further contamination of the local water reserves.
Findings	No findings raised
Conclusion	The project is a wastewater recycle/reuse project and reduces the further contamination of groundwater and local water reserves.

Project Owner- Identification and communication

Means of Project Verification	PCNMR, communication agreement, commissioning certificate.
Findings	No findings raised
Conclusion	The project owner was identified through a communication agreement signed between project owner and project aggregator. Commissioning certificate was also verified and they clearly establish the project ownership. The identification and communication correctly meet the requirement of project verification and UWR project standard. Project owner: Tirupur Murugampalayam Common Effluents Treatment Company Pvt. Ltd.

Positive Social Impact/Ecological Aspects/Recharge Aspects

Means of Project Verification	Project has provided temporary employment to local people during its installation and commissioning. Also post commissioning some of people have employed permanently and local people were engaged leading to social financial benefit to surrounding. Overall social impact of project implementation is positive on the surrounding area. Also, The PP has showcased the successful wastewater treatment of industrial effluent, thus saving millions of liters of wastewater from the textile dyeing member units. The project activity showcases best-in-class wastewater treatment technology that can replace the equivalent freshwater and industrial demand in different sectors for nonportable purposes while reducing the proportion of untreated wastewater and substantially increasing recycling and safe reuse in India.
Findings	CL 08 was raised and closed successfully. More information presented appendix below.
Conclusion	Project has overall social positive impact and ecological positive impact

Sustainable development aspects

Means of Project	PP has claimed SDG Goals 3, 6, 8, 13 & 15

Verification	SDG 3 is good health and well-being and it is verified during remote audit. PP showcases how recycling and reusing wastewater can prevent depletion of natural water reserves and prevent water scarcity during droughts. The hazardous impact of industrial wastewater is avoided due to this project. This ensures water availability in water-scarce zones that help promotes healthy lives and well-being in the region. SDG 6 is sustainable development and is verified during remote audit. The project has showcased recycling and safe reuse of 10,900 cubic meter/day (10.9 MLD) which is the operational capacity of the plant and the actual installed capacity is 11,000 cubic meter/day (11 MLD) within the industry during this monitoring period and the same was verified by the assessment team. SDG 8 is decent work & economic growth and this was verified by the supporting document of employment details provided. SDG 13 is climate action. This was verified during the remote audit. PP recycles and reuses the industrial wastewater. Recycling and reusing wastewater is an effective solution for climate change adaptation because it helps mitigate the impacts of droughts, floods, and other extreme weather events that are becoming increasingly common due to climate change due to water scarcity. SDG 15 is life on land. This was verified during the remote audit. PP has implemented a reforestation project in the nearby area to revitalize the local ecosystem. This was verified by the assessment team by the supporting documents of reforestation provided by the PP.
Findings	CL 08 was raised combined with the positive social impact verification finding and closed successfully. More information presented appendix below.
Conclusion	The project has the capability to address SDG 3, 6, 8, 13 & 15.

❖ Internal quality control

The verifier confirms that,

- Due professional care has been taken while reviewing the submitted document.
- There is no conflict of interest as the verifier has no other engagement with either the aggregatoror project owner directly or indirectly.
- Verification team consists of experienced personnel.

Project Verification opinion

Assessment team conducted documentation review the PCNMR against the UWR RoU verification standard version 2.0 and UWR RoU standard version 7.0 and the UWR-PCNMR FORM Version 3.0.

It is confirmed that the project activity is an industrial effluent treatment plant, that is located in Erankattu Thottam, Murugampalayam, Iduvamplayam (PO), District Tirupur, Tamil Nadu, India.

The geo co-ordinates of the plant have been mentioned in sections above. Assessment team performed an offsite audit and confirmed that the location described in the PCNMR is accurate. The verification was performed on the basis of UWR requirements, and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The verification consisted of the following three phases: i) desk review of the PCNMR and additional background documents; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The project correctly applies the approved baseline and monitoring methodology.

The monitoring plan provides for the monitoring of the project's Rainwater Offset Unit (RoU) calculations. The monitoring arrangements described in the monitoring plan are feasible within the project design, and the project participants are able to implement the monitoring plan. Given that the project is implemented and maintained as designed, the project has achieved the RoU's of 59,49,077 RoU during the monitoring period i.e. from 01/01/2014 to 31/12/2023.

The review of the project design documentation and the subsequent follow-up interviews have provided assessment team with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all applicable UWR requirements. Assessment team thus requests the registration of the proposed UWR project activity.

Appendix 1. Abbreviations

Abbreviations	Full texts
UWR	Universal Water Registry
PCNMR	Project Concept Note and Monitoring Report
NGO	Non-Governmental Organization
CAR	Corrective Action Request
CL	Clarification Request
ETP	Effluent Treatment Plant
CETP	Common Effluent Treatment Plant
RoU	Rainwater Offset Unit
DPR	Detailed Project Report

Appendix 2. Competence of team members and technical reviewers

❖ Mr. Pankaj Kumar worked as team leader – Bihar for South Asia Climate Proofing and Growth Development (CPGD) – Climate Change Innovation Programme (CCIP) supported by DFID that seeks to mainstream climate change resilience into planning and budgeting at the national and sub-national level in India, Pakistan, Nepal, and Afghanistan. Pankaj Kumar has worked previously with IL&FS Infrastructure Development Corporation and BUIDCO (Bihar Urban Infrastructure Development Corporation), Govt. of Bihar as Environmental Specialist for WB & ADB funded projects. Prior to this, he worked with Carbon Check (UNFCCC accredited DoE), Johannesburg, RSA, Applus certification as Team Leader for validation, verification of around 100 GHG projects in Asia, Africa, USA, Asia Pacific & Americas. Pankaj is accredited Lead Auditor, Validator, Verifier and Technical Expert for Sectoral Scope/Technical Area – 1.1, 1.2, 3.1, 4.1, 13.1 by Enviance. He is also member of task force on climate change & human health, Health Department, GoB and on roster of UNICEF's WASH experts. He is an experienced, qualified and result oriented Environment Professional having more than 14 yrs. of relevant experience in Climate Change (Mitigation & Adaptation), Environmental Due Diligence, Disaster Risk Reduction, Validation and Verification of GHG project under CDM, Verified Carbon Standard, Gold Standard & Social Carbon Standard, Brazil. He provides technical support for environmental investigative, consultative and remedial projects involving air, water and soil, Waste management, EIA, Environmental Compliance, ISO 14001, OHSAS 18001, GHG accounting (ISO 14064) and Carbon foot printing. Pankaj Kumar is Masters in Environment Management from Forest Research Institute (University), I.C.F.R.E, Dehradun, which is Centre of Excellence in South East Asia for Forestry education & research and PGDEL from National Law School of India University, Bangalore (India).

❖ Ms. Swati Mahajan is graduate in Environmental Engineering from Shivaji University, India and previously worked as an Environment Engineer at Eco Designs India Private Ltd., Pune. She is adept in designing of landfill sites for solid waste management. She also has hands on experience in cost benefit analysis and preparation of DPRs for SWM projects. She also has done a certified course in carbon capture and storage from Edinburg University. Currently working as GHG assessor for projects under various GHG mechanisms like GCC, ICR, UCR and VERRA.

❖ Ms. Ritu Singh has done Masters in Environmental Science from Central University of South Bihar, Gaya and bachelor of Science in Zoology from Magadh Mahila College, Patna University, India. She has done Masters' research focused on solid waste management during and post covid-19 pandemic and conducted a survey in Medical Colleges of Bihar to study the trends of waste management. She has more than 2 year working experience in True Quality Certifications Pvt. Ltd. (An outsource entity for LGAI Technological Center, S.A. (Spain) "Applus+ Certification")

and has been involved in supporting Audit teams for Validation and Verifications of Project Activities (Renewable and non-Renewable projects) under CDM/VCS/GS4GG/GCC programs. Currently, Ritu is engaged as an internal resource with Enviance Services Private Limited, where she is accredited as a Lead Auditor, Validator, Verifier, and Technical Expert for Sectoral Scope/Technical Area 1.2 by Enviance.

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
1	NA	Communication agreement		Project Owner
2	NA	Project Concept Note and Monitoring Report		Aggregator
3	NA	RoU Calculation sheet		Aggregator
4	NA	Declaration on avoidance of double counting		Aggregator
5	NA	Commissioning Certificates for the ETP		Aggregator
6	NA	Water flow details/log book details for thecomplete monitoring period		Aggregator
7	NA	Calibration certificates for water meters		Aggregator
8	UWR	UWR RoU Program manual version 2.0 UWR RoU standard version 7.0 UWR RoU Verification standard version 2 UWR terms and conditions		Universal Water Registry

Clarification request, corrective action request and forward action request

Table 1. CLs from this Project Verification

Classification	☐ **CAR** ☒ **CL/CR** ☐ **FAR**	**Number:**	**01**
Raised by:	**Ms. Ritu Singh**	**Document Reference**	**PCNMR**
Finding Description		**Date:**	**22/01/2025**
PP shall update the section A.2 and A.2.1 of PCNMR by adding information of project owner, company details and detailed description of purpose of project activity.			
Client/Responsible Party/Project Proponent Response		**Date:**	**27/01/2025**
PP has Updated section A.2. and added Purpose of the project in Section A.2.1.			
Validation/Verification Team Assessment		**Date:**	**27/01/2025**
PP has added the mentioned details and the same has been verified in PCNMR version 2.0. Hence, this part of CL is closed.			

Classification	☐ **CAR** ☒ **CL/CR** ☐ **FAR**	**Number:**	**02**
Raised by:	**Ms. Ritu Singh**	**Document Reference**	**PCNMR**
Finding Description		**Date:**	**22/01/2025**

1. PP shall submit the commissioning certificate of the project activity. 2. As discussed during remote audit PP shall submit the declaration stating actual and current operational capacity of the plant.		
Client/Responsible Party/Project Proponent Response	**Date:**	**27/01/2025**
1. PP has submitted a Declaration that the project has been commissioned in 2008. 2. PP has submitted a declaration stating actual and current operational capacity of the plant.		
Validation/Verification Team Assessment	**Date:**	**27/01/2025**
1. PP has submitted the commissioning certificate of the project activity. 2. PP has submitted a declaration mentioning capacities of the plant. Hence, this part of CL is closed.		

Classification	☐ **CAR** ☒ **CL/CR** ☐ **FAR**	**Number:**	**03**
Raised by:	**Ms. Ritu Singh**	**Document Reference**	**PCNMR**
Finding Description		**Date:**	**22/01/2025**
1. PP shall submit the clear pictures of the meter in which serial number are visible and are consistent with the submitted calibration certificate. 2. PP shall submit the single line diagram of the project activity and the same is to be added in PCNMR.			
Client/Responsible Party/Project Proponent Response		**Date:**	**27/01/2025**
1. PP has submitted the four calibrated Meter photos including INLET, OUTLET, BRINE A, BRINE B. 2. The PP would like to clarify that effluent treatment plants are typically designed based on simulations, and therefore, detailed single-line diagrams may not always be readily available.			
Validation/Verification Team Assessment		**Date:**	**27/01/2025**
1. PP has submitted the meter pictures in which details are clearly visible. 2. PP has submitted the flow chart of the project activity. Hence, this part of CL is closed.			

Classification	☐ **CAR** ☒ **CL/CR** ☐ **FAR**	**Number:**	**04**
Raised by:	**Ms. Ritu Singh**	**Document Reference**	**PCNMR**
Finding Description		**Date:**	**22/01/2025**
1. PP shall submit the list of chemicals used in the treatment process and the same shall be added in PCNMR. 2. PP shall submit the technical specifications of RO and it's membranes and the same shall be added in PCNMR.			
Client/Responsible Party/Project Proponent Response		**Date:**	**27/01/2025**
1. PP has submitted list of chemicals used in the treatment process and the same has added in PCNMR. 2. PP has submitted the technical specifications of RO and Membrane details has added in PCNMR.			
Validation/Verification Team Assessment		**Date:**	**27/01/2025**
1. PP has submitted the list of chemicals used in the treatment process and the same has been added in the PCNMR version 2.0. 2. PP has submitted the technical specifications of RO and the same has been added in the PCNMR version 2.0			

Hence, this part of CL is closed.

Classification	☐ **CAR** ☒ **CL/CR** ☐ **FAR**	**Number:**	**05**
Raised by:	**Ms. Ritu Singh**	**Document Reference**	**PCNMR**
Finding Description		**Date:**	**22/01/2025**
PP shall submit the details of local stakeholder meetings. Supporting documents of any ongoing consultation with stakeholders and also the list of names of local stakeholder.			
Client/Responsible Party/Project Proponent Response		**Date:**	**27/01/2025**
PP has submitted the details of local stakeholder & list of names of local stakeholder.			
Validation/Verification Team Assessment		**Date:**	**27/01/2025**
PP has submitted the details of the local stakeholder and the same has been verified. Hence, this part of CL is closed.			

Classification	☐ **CAR** ☒ **CL/CR** ☐ **FAR**	**Number:**	**06**
Raised by:	**Ms. Ritu Singh**	**Document Reference**	**PCNMR**
Finding Description		**Date:**	**22/01/2025**
PP shall submit the supporting document of the treated water quality and the same is to added in PCNMR.			
Client/Responsible Party/Project Proponent Response		**Date:**	**27/01/2025**
PP has submitted the supporting document of the treated water quality and the same has added in PCNMR.			
Validation/Verification Team Assessment		**Date:**	**27/01/2025**
PP has submitted the treated water quality report and the same has been added in the PCNMR version 2.0. Hence, this part of CL is closed.			

Classification	☐ **CAR** ☒ **CL/CR** ☐ **FAR**	**Number:**	**07**
Raised by:	**Ms. Ritu Singh**	**Document Reference**	**PCNMR**
Finding Description		**Date:**	**22/01/2025**
PP shall submit the supporting document of the inlet (raw effluent received, RO permeate, brine) and outlet water data.			
Client/Responsible Party/Project Proponent Response		**Date:**	**27/01/2025**
PP has Submitted the supporting Documents of inlet (raw effluent received, RO permeate, brine) and outlet water data.			
Validation/Verification Team Assessment		**Date:**	**27/01/2025**
PP has submitted the supporting documents of the mentioned water flow data and the same has been verified. Hence, this part of CL is closed.			

Classification	☐ **CAR** ☒ **CL/CR** ☐ **FAR**	**Number:**	**08**

Raised by:	**Ms. Ritu Singh**	**Document Reference**	**PCNMR**
Finding Description		**Date:**	**22/01/2025**
PP has claimed SDG goals 8 and 15. PP shall submit the supporting documents.			
Client/Responsible Party/Project Proponent Response		**Date:**	**27/01/2025**
PP has submitted photographs of SDG Goal 8 & 15 with supporting documents.			
Validation/Verification Team Assessment		**Date:**	**27/01/2025**
PP has submitted the supporting documents of claimed SDG goals 8 & 15 and the same has been verified. Hence, this part of CL is closed.			

Table 2. CARs from this Project Verification

~~**Classification**~~	☒ ~~**CAR**~~ ☐ ~~**CL/CR**~~ ☐ ~~**FAR**~~	~~**Number:**~~	
~~**Raised by:**~~		~~**Document Reference**~~	
~~**Finding Description**~~		~~**Date:**~~	
~~**Client/Responsible Party/Project Proponent Response**~~		~~**Date:**~~	
~~**Validation/Verification Team Assessment**~~		~~**Date:**~~	

Table 3. FARs from this Project Verification

~~**FAR ID**~~	~~xx~~	~~**Section no.**~~		~~**Date:** DD/MM/YYYY~~
~~**Description of FAR**~~				
~~**Project Owner's response**~~				~~**Date:** DD/MM/YYYY~~
~~**Documentation provided by Project Owner**~~				
~~**UWR Project Verifier assessment**~~				~~**Date:** DD/MM/YYYY~~