Plastic Waste Reduction Standard

JOINT VALIDATION AND VERIFICATION OF INCENTIVISING RECYCLING IN INDIA THROUGH THE GENERATION OF PLASTIC CREDITS

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Client	Value Network Ventures Advisory Services Pvt. Ltd.
Project Title	Incentivising recycling in India through the generation of plastic credits
Project ID	PWRP 3597
Project Location	Hyderabad, India.
Monitoring Period	05/02/2020 to 04/02/2022

Summary

- A description of the project

The activities of project entitled “Incentivising recycling in India through the generation of plastic credits” is being performed in Hyderabad, Telangana, India. The aim of the project involved mechanical recycling of plastics waste to convert it into valuable material having improved quality, so that it can be used as an alternative to virgin polymer for manufacturing of mainstream products and packaging material.

Under this project Banyan Nation is operating a state-of-the-art recycling facility with a total operational capacity of 10,000 TPA (8000 TPA for HPDE & 2000 TPA for PP) as per the consent order /13/. Also, the capacity can be expanded by 12,000 to 15,000 TPA (It is confirmed in the response received for the CL 1). At the recycling facility they are producing premium quality of recycled plastics which is suitable for use in 'bottle to bottle' applications,

The implementation of project not only resulted in reduction in the quantity of waste being sent to landfills or leaking to the waterways but also promotes responsible consumption and production. Apart from this implementation of project also provided employment opportunity for the workers engaged in the waste sorting and recycling in organised manner with better training /20/ and income opportunities /04/.

The stakeholder’s involved in Banyan's supply chain also got financial benefits after their association with the project. With their equal opportunity employer policy /21/, they are providing social security and health insurance benefits /14/ to their employs.

- A description of the validation and verification

Value Network Ventures Advisory Services Pvt Ltd. had appointed /08/ the VVB, Carbon Check (India) Private Limited on dated 16/09/2022, to perform an independent joint validation and verification of the project “Incentivising recycling in India through the generation of plastic credits” to assess the process of the project against the requirements of Plastic Waste Reduction Standard v1.0 (Dated 10-February-2021) /B01/. The combined validation and verification were conducted through the desk review of the VCS Joint PD & MR v1.6 /01/, corresponding estimated plastic credit spreadsheet /02/ and other relevant supporting documents made available by the project proponent to the validation and verification team as well as with the observation made and interviews with different stockholders involved in the project during onsite visit. This verification of project was conducted for the period of 05/02/2020 to 04/02/2022.

- The purpose and scope of validation and verification

Purpose:

Carbon Check (India) Private Limited (CCIPL) is engaged in the project with its clear objective to perform a thorough and independent assessment and validation of the project activities as per the requirements of the VERRA Plastic Program rules. The purpose of this joint validation and verification was to assess the conformance of the 1st PAI with respect to the requirements set out in the Plastic Program rules for project. During the joint validation and verification process, the project components were assessed whether they compliance with the Plastic Waste Reduction Standard v1.0 (dated 10-February-2021) /B01/ rules and requirements as well as the related methodology PWRM 0002 v1.1 (dated 30/06/2022) /B03/.

Scope:

The scope of the validation and verification includes an independent and objective review of the VCS Joint Project Description and Monitoring report (VCS Joint PD & MR v1.6) /01/ against the relevant criteria and guidance laid down in the documents under the Plastic Program which includes the following: The Plastic Waste Reduction Standard v1.0, (dated 10/02/2021) /B01/ and PWRM 0002 v1.1 (dated 30/06/2022) /B03/. This review was also conducted to assess the claims and assumptions made in the project description VCS Joint PD & MR v1.6 /01/, without limitation provided by the project proponent.

- **The method and criteria used for validation and verification.**

The method and criteria used for Validation:

I. A desk review of the project description documents.
   - A review of data and information.
   - Cross checks between information provided in Joint PD & MR and information from sources with all necessary means without limitations to the information provided by the project proponent.

II. Onsite interviews with project stakeholders
   - Interviews with relevant stakeholders in host country with personnel having knowledge of the project development via telephone, email, or direct on-site visits.
   - Cross checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent.

III. Taking reference from information available in public domain related to projects or technologies like the projects under validation and review and based on that approved methodology had been applied for the appropriateness of formulae and accuracy of calculations.

IV. The resolution of outstanding issues and the issuance of the final Joint Validation & Verification report and opinion.

The method and criteria used for verification.

(a) <u>Desk review, involving:</u>

(i) Review of the data and information presented to verify their completeness.

(ii) Review of the monitoring plans and its methodology with giving focused attention on the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance as well as quality control procedures.

(iii) Evaluation of data management system, quality assurance and quality control procedures in the context of their influence on the generation and reporting of emission reductions.

(b) <u>Onsite assessment involving:</u>

(i) Assessment of the implementation and operation of the proposed VCS project activity as per the VCS Joint PD & MR.

(ii) Verification of implemented monitoring plan as per the VCS Joint PD & MR as well as applied baseline and monitoring methodology.

(iii) Review of information flows for generating, aggregating, and reporting the monitoring parameters.

(iv) Interview with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the VCS Joint PD & MR.

(v) To cross-check between information provided in the monitoring report and data from other sources such as inventories, purchase records, or similar data sources.

(vi) To check the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the VCS Joint PD & MR and the selected methodology.

(vii) Review of calculations and assumptions made in determining the GHG data and emission reductions.

(viii) Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

- **The number of findings raised during validation and verification.**

  30 Corrective Action Request (CAR); 11 Clarification Requests (CLs).

  All the raised findings have been successfully resolved by the PP.

- **Any uncertainties associated with the validation and verification.**

  There are no uncertainties associated with the joint validation & verification of the project activity. The validation and verification have been done with a reasonable level of assurance.

  The VCS Joint PD & MR v1.6 /01/, estimated plastic credit spreadsheet /02/ along with the supporting documents provided are in line with all the Plastic Waste Reduction Standard /B01/. The validation and verification team has detected no further uncertainties or quality restriction.

- **Summary of the validation and verification conclusions**

  Carbon Check (India) Private Ltd. concludes the validation and verification with a positive opinion that the VCS Project "Incentivising recycling in India through the generation of plastic credits" in India as described in the VCS Joint PD & MR v1.6, dated 12/07/2023 /01/, meets all applicable VCS requirements, including those specified in the Plastic Waste Reduction Standard (Version 1.0 dated 10/02/2021) /B01/, relevant methodology, tools, and guidelines.

  The baseline and the selected monitoring methodology PWRM 0002 v1.1 (dated 30/06/2022) /B03/ is applicable to the project and correctly applied. Carbon Check (India) Private Ltd., therefore, requests the registration of the project as a VCS project. The average annual estimated recycled plastic waste for HDPE & PP is 8,857 tons/year.

In CCIPL's opinion, the plastic credits reported for the "Incentivising recycling in India through the generation of plastic credits" in the VCS Joint PD & MR v1.6, dated 12/06/2023 /01/ are fairly and correctly stated. CCIPL is therefore able to certify for the plastic credits of the project "Incentivising recycling in India through the generation of plastic credits". According to the risk-based assessment conducted during the validation and verification, we can state that the project is in line with what was described in the project description and is in line with VERRAs plastic standard and methodologies for plastic waste recycling. The average annual recycled plastic waste credits for 07 years are estimated as 8,857 tons/year.

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1 VALIDATION AND VERIFICATION PROCESS

1.1 Objective

Carbon Check India Private Limited (CCIPL) had been commissioned by Value Network Ventures Advisory Services Pvt. Ltd. (VNV) to conduct joint validation and verification for their plastic recycling project "Incentivising recycling in India through the generation of plastic credits."

Validation aims to independent assessment of the project against the VERRA Plastic Waste Reduction Standard /B01/ to ensure its eligibility for registration. This includes confirming whether the project activities align with the descriptions provided in the VCS Joint PD & MR v1.6 /01/, assessing compliance with plastic standard criteria, applicable methodology (including monitoring system, additionality, stakeholder engagement, baselines, and social and environmental impacts), among other factors.

On the other hand, verification focuses on reviewing the quality and quantity plastic waste that has been recycled. This process may occur periodically to obtain plastic credits. The verification checks whether the volume of plastic recycling adheres to the requirements outlined in the methodology (PWRM0002 v1.1) /B03/, VERRA plastic standard, and project description.

Through this joint validation and verification activities, it is to be confirmed that:

- The project is implemented as described in the Joint PD & MR v1.6 /01/
- The monitoring system is implemented and fully functional to generate plastic credits without any double counting, and
- The data reported are accurate, complete, consistent, transparent, and free of material error or omission by checking the monitoring records and the credits calculation sheet.

1.2 Scope and Criteria

The project validation and verification scope are defined as an independent and objective review of the Join project description and monitoring report produced under the “Incentivising recycling in India through the generation of plastic credits” in India by the PP.

Following key elements within the scope were validated and verified:

1. whether the project description matches with reality,
2. the correct definition and calculation of the baseline scenario,
3. the accuracy of methodology and assumptions taken for additionality of the project,
4. the transparency and adequateness in monitoring of recycled plastic volumes,
5. the accuracy of method used for estimation of plastic waste to be recycled and

6. the social and environmental impact of the project.
7. to make observation through onsite visit to the project activities
8. The project is reviewed against the VERRA plastic standard and the Plastic Waste Mechanical Recycling Methodology (PWRM0002 v1.1) /B03/.
9. The scope of the project activities is conducted to eventually express a validation and verification conclusion with reasonable level of assurance regarding the plastic credit of the "Incentivising recycling in India through the generation of plastic credits" in India.

1.3 Level of Assurance

A reasonable level of assurance has been achieved for this joint validation and verification, adhering to the ISO 14064-3 guidelines and the requirements of the VERRA plastic standard. In order to achieve the reasonable level of assurance, supporting documents were thoroughly examined and onsite visit was conducted to verify the statments. The verification of supporting documents was carried out both online and during the on-site visits. To ensure a reasonable level of assurance, site visits were conducted at multiple locations in Telangana (Hyderabad and Malkajgiri) India, where the project proponent showcased their collection and recycling facilities as per the auditors' requirements. Interviews with employees and stakeholders were also conducted during the on-site visits.

1.4 Summary Description of the Project

Project title	Incentivising recycling in India through the generation of plastic credits
(main) Project Participants	Value Network Ventures Advisory Services Pte. Ltd.
Location of the project	Hyderabad, Telangana, India
Project start date	05/02/2020
Applied methodology/version	PWRM0002 Plastic Waste Recycling Methodology version 1.1
Plastic crediting period	First crediting period is from 05/02/2020 to 04/02/2027 (7 years).

The project involves in the mechanical recycling of waste plastics to create a high-quality material as an alternative to virgin polymer, which is suitable for various mainstream products and packaging. Through intelligent and thoughtful process design and engineering systems, the organization effectively minimizes its water footprint. In Hyderabad, the project runs a cutting-edge mechanical recycling facility, producing premium recycled plastics having comparable to the quality of virgin plastic specifically designed for "bottle to bottle" applications.

The facility has been operating from the date 05-02-2020 and the start date was taken as per the consent order /13/ for operation received from the government by Banyan Nation. The total capacity of the plastic waste recycling facility is 10,000 tons/year (8000 TPA for HPDE & 2000

TPA for PP) and it can be expanded to 15,000 tons/year (It is confirmed in the response received for the CL 1). Before the project commenced, the plastic waste sector lacked organization and proper recycling practices. Plastic waste was indiscriminately discarded into disorganized landfills. The absence of comprehensive knowledge about different types of plastics led waste pickers to inadvertently mix and pollute plastic waste, resulting in lower recycling efficiency and reduced quality of the recycled end products.

As per data provided in the VCS Joint PD & MR v1.6 /01/ from the Telangana Pollution Control Board, Hyderabad produces a staggering 517.8 tonnes of plastic waste daily, equating to approximately 188,997 tonnes annually. When assessing per capita plastic consumption, the city's civic authorities grapple with the task of managing 108,000 tonnes of plastic waste for its nine million residents. Amidst this wide spectrum of figures, Hyderabad finds itself immersed in a deluge of plastic waste (reference to the link provided in the Joint PD & MR v1.6). Moreover, Banyan Nation's efforts are particularly concentrated on recycling HDPE and PP plastics, which are not as commonly recycled in Hyderabad.

The project complies with the India's plastic waste rules i.e., Plastic waste management rules 2016 /B05/ in India that provides rules and regulation for recycling of plastic wastes and extended producer responsibility (EPR) schemes in the region that are relevant to the project activity and material type(s). Banyan nation has registered /13/ with CPCB under the Plastic waste management rules 2016 /B05/, India.

Banyan Nation, as indicated in its registration license /03/, is the owner of the project activity. Furthermore, VNV collaborates /32/ with Banyan Nation as the project proponent and carbon finance party. Banyan Nation holds ownership of the recycling activity, which involves the procurement of plastic waste from informal collectors and traders across various locations for processing at their recycling plant. The average annual estimated recycled plastic waste for HDPE & PP is 8,857 tons/year.

1.5 Audit Team Composition

The Validation and Verification team confirms the contractual relationship signed between the CCIPL and the PP. The team assigned to the Plastic Project verification meets the CCIPL's internal procedures including the Plastic waste reduction requirements for the team composition and competence. The Plastic Project verification team has undergone a thorough contract review as per Plastic Waste Reduction Standard /01/ and CCIPL's procedures and requirements.

Sl. No.	Name of Validation/ verification/certification team members	Allocated Tasks (Desk review, OSV, Protocol filling, DVR/findings preparation/TR)	Expertise
1.	Amit Anand (Team Leader)	Desk review, OSV, interview, documents review and DVR/finding's preparation	Sectoral Scope - 1.1, 1.2, 3.1, 13.1, 13.2, 14.1, 15.1, 7.1, 8.1 & Plastic Waste Reduction Standard
2.	Sumant Shekhar (Technical Expert)	Technical expert inputs during review process	Plastic Waste Reduction Standard

3.	Abhinav Attaluri (Trainee Assessor/Technical expert)	Desk review, OSV, interview, documents review and DVR/finding's preparation	Plastic Waste Reduction Standard
4.	Vikash Kumar Singh (Technical Reviewer)	Technical review	1.1, 1.2, 3.1, 4.1, 7.1, 13.1, 13.2, 14.1, 15.1 & Plastic Waste Reduction Standard

1.6 Method and Criteria

The project was implemented in line with the ISO 14064-3 standard, Verra plastic waste reduction rules and requirements, the VERRA VCS guidelines and the VCS Validation and Verification Manual. These protocols were adapted to plastics and the necessity to conduct the validation and verification.

For conducting validation and verification process smoothly, the entire process is conducted in three stages. Following are the details of the activities carried out at the various stages.

A) Pre-execution phase:

- Preparation of Validation and verification plan. This plan indicates the period of the assessment, list of documents to be reviewed, date and locations to for onsite visit and stakeholders to be consulted.
- Preparation of checklist, of documents required and observations to be made during the onsite visit, based on the documents of Verra (the Verra plastic standard, the methodologies, and the format for this report).
- Review of the Project description and monitoring report (PD) prepared by PP.

B) Execution phase:

To obtain the evidence during validation and verification following process were adopted:

- Review of the Document
  - desk review of the Joint Plastic Project Description for application of methodology
  - desk review of Monitoring Report for authenticity of the data and information.
  - Traceability assessment through cross checking between information provided in the JPD&MR and information from sources with all necessary means without limitations to the information provided by the project proponent.
- On-site visit,
  - verify the safeguards.
  - Interviews with relevant stakeholders to assess their knowledge about project.
  - Cross verify the information provided by PP through interview with personnel involved in project.

During the onsite visit of the execution phase following conditions were taken into account by the validation and verification team are Location/region, Project activity, Quantity/Volumes of plastic waste recycled.

- Taking reference to information available in public domain relating to projects or technologies like projects under verification and review and based on that the approved methodology had been applied for the appropriateness of formulae and accuracy of calculations.

C) Compilation of data and report preparation

- Resolving CARs, CLs and open questions.
- Sharing improved or missing documents.
- Clarification calls where needed.
- Release of final validation and verification report

The certificate is based on the assessment of the VCS Joint PD & MR v1.6 /01/ undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews and stakeholder interviews, review of the applicable/applied methodology (PWRM0002 v1.1) /B03/ and their underlying calculations of plastic credits spreadsheet /02/.

1.7 Document Review

CCIPL conducted a comprehensive document review using standard auditing techniques, which included document analysis and on-site interviews. The assessment also involved evaluating the applied methodology, its underlying monitoring parameters, and calculations to ensure the accuracy and reliability of the information provided. The validation and verification process primarily relied on scrutinizing the VCS Joint PD & MR v1.6 and the supporting documentation to assess the project's quality and compliance.

- A review of data and information presented by the PP to verify their completeness.
- A review of the MP and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the QA/QC procedures, and
- An evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of plastic waste collection/ recycling.

The Joint PD and MR v1.3 /01/ was initially reviewed and CCIPL requested the PP to present the supporting information and documents /02/-/29/. The documents were reviewed by CCIPL. Through the process of the validation and verification, the revised Joint PD & MR v1.6 /01/, monitoring report and the supporting documents were evaluated to confirm the actions taken by the PP against the CARs and CLs issued by the CCIPL team. The list of documents referred during this verification has been provided in Appendix-1.

1.8 Interviews

S. No.	Date	Name	Organisation	Topic
/01/	06/02/2023	Rashi Agrawal	Banyan Nation	• Project Design description by PP • Project Implementation status and roles and responsibilities of PP • Discussion on safety measures to be followed while visiting different facilities (recycling centre / collection points) • Physical Visit to recycling plant • Discussion on recycling process and technologies used. • Project start date and Project Location • Baseline Scenario • Baseline Identification and Additionality • Training • Monitoring and reporting documentation • Quality Assurance – Management and operating system • Local Stakeholders meeting process • Date and details of the information got for the LSC • Feedback from the Local people • Compliance with relevant laws • Roles and responsibility • Different type of plastic waste brought to the recycling facility • Waste handling procedure and use of PPE • Discussion on collection process
		Vaishnavi D	Banyan Nation	
		Deboshmita Dey	VNV Advisory	
		Ajay Mehra	VNV Advisory	
/02/	07/02/2023	Vaishnavi D	Banyan Nation	• Physical visit to the collection facilities • Discussion on collection process • Different type of plastic waste collected and sold to the client • Discussion on the entire process of collection and bringing to recycling facility
		Yadgiri	Banyan Nation	
		Deboshmita Dey	VNV Advisory	

		Ajay Mehra	VNV Advisory	• QA/QC procedure • Training and Use of PPE • Interview with waste pickers
		Sudhakar Reddy	Surya Chandra traders (Scrap dealer)	
		A Verra Reddy	Scrap dealer	
		Shivram Krishana	Waste sorting worker	
		Tulsi Mahalakshmi	Waste sorting worker	
		B Sunredra	Scrap dealer	
		T Swamy	Scrap dealer	
/03/	08/02/2023	Rashi Agrawal	Banyan Nation	Discussion on the: • Design of grouped project • Applicability of the baseline and monitoring methodology • Appropriateness of identified baseline scenario for collection and recycling • Eligibility criteria • Approach for demonstration of additionality • Monitoring approach and procedure • Calculation of collection and recycling credits (ex-ante) • Regulatory licenses • Ownership documents
		Vaishnavi D	Banyan Nation	
		Deboshmita Dey	VNV Advisory	
		Ajay Mehra	VNV Advisory	

1.9 Site Inspections

During the assessment period, onsite inspections were conducted from 06/02/2023 to 08/02/2023. The following site locations were visited by the verification and validation team:

Duration of on-site inspection: 06/02/2023 to 08/02/2023				
S	Activity performed on-site	Site location	Date	Team member
	Discussions and review of: • Project Design description by PP • Project Implementation status and roles and responsibilities of PP • Discussion on safety measures to be followed while visiting different facilities (recycling centre / collection points) • Physical Visit to recycling plant • Discussion on recycling process and technologies used. • Project start date and Project Location • Baseline Scenario • Baseline Identification and Additionality • Training • Monitoring and reporting documentation • Quality Assurance – Management and operating system • Local Stakeholders meeting process • Date and details of the information got for the LSC • Feedback from the Local people • Compliance with relevant laws • Roles and responsibility • Physical visit to the collection facilities • Discussion on collection process • Different type of plastic waste collected and sold to the client • Discussion on the entire process of collection and bringing to recycling facility • QA/QC procedure • Training and Use of PPE • Interview with waste pickers	Banyan Sustainable Waste Management Private Limited (Banyan Nation), Hyderabad, Telangana	06/02/2023	• Amit Anand • Shekhar Sumant
		Collection sites: • Dundigul, Malkajgiri, Telangana • Shameerpet • Hayath Nagar LB Nagar, Hyderabad	07/02/2023	
		Banyan Sustainable Waste Management Private Limited (Banyan Nation), Hyderabad, Telangana	08/02/2023	

1.10 Public Comments

The public commenting period for the project took place from 02/11/2022 to 02/12/2022, and one comment was received /30/. The project proponent (PP) addressed the comment received which is following under section 2.2 of the Joint PD and MR v1.6 /01/. The response provided by the PP was thoroughly verified through interviews with Banyan Nation's staff.

1.11 Resolution of Findings

In this section findings of the joint validation & verification of the project activity including, but are not limited to, document review, assessments and onsite interviews are summarized. Material discrepancies identified during the validation are addressed either as CARs, CLs or FARs.

Material discrepancies identified during the validation are addressed either as CARs, CLs or FARs.

- **Clarification requests (CLs):** Project reporting lacks transparency and further information is needed to determine if a material discrepancy is present.
- **Corrective action requests (CARs):** The VVB has identified a material discrepancy or non-conformance that the project proponent must address.

A total of 30 CARs and 11 CLs were identified during this joint validation & verification by the Carbon Check team, all of which have been resolved by the PP. Please refer to Appendix 3 below for the details of the CARs/CLs and their closure.

1.11.1 Forward Action Requests

A forward action request (FAR) should be issued, where:

Forward Action Request (FAR) is to be raised when the monitoring and reporting require attention and/or adjustment for the next verification period. FARs VVBs not relate to VCS requirements for issuance of ERs achieved during subject monitoring.

CCIPL has raised 02 FAR's during this joint periodic validation and verification refer appendix 3, table no 3.

2 VALIDATION FINDINGS

2.1 Project Details

2.1.1 Description of the Project Activity

The project activity is a grouped project and at the time of joint validation and verification, it consists of 01 project activity instance (hereafter referred as 1st PAI). The assessment in this report corresponds to the assessment of the generic description of the grouped project (where specified) otherwise focused to the 1st PAI only. The activity under this project is comprised of verification and validation of recycling facilities of Banyan Nation which is under operation from 05/02/2020 /13/. The project start date is the date on which the project began collecting and/or recycling plastic waste accordingly the project start date of the 1st PAI as per the consent order /13/ for operations issued to Banyan Nation from the Telangana pollution control board. In this way Banyan Nation is not only helping in the reduction in the quantum of community driven waste being transferred to landfill sites but also helping in controlling the leakage of those wastes into rivers and oceans. It also encourages responsible consumption and production by reducing reliance on extractive virgin plastics.

The total length of the crediting period is 07 years i.e., from 05/02/2020 to 04/02/2027, which is renewable twice. As the part of the project, organization regularly providing trainings /20/ to the scrap collectors working with the company to helps them to add more value to their scrap through better segregation /20/. After getting associated with this recycling facilities most of the scrap dealers in Banyan's supply chain have benefitted financially (through better income, reliability, and stability) /04/. The Organization is an equal opportunity /21/ employer and relies on women sorters. Project provides social security and health insurance benefits to each of the workers in their production facility /14/.

Stakeholders, involved in entire process at different stages, were interviewed to confirm the information mentioned in the Joint project description and monitoring report, including involvement of Value Network Ventures Advisory Services Pvt. Ltd (Carbon finance party) as the project consultant as per the project details.

An on-site audit was conducted for the validation and verification of the completeness and accuracy of the recycling facilities mentioned in the project description and monitoring report /01/ submitted by Banyan Nation.

2.1.2 Project Type and Eligibility

The project entitled, "Incentivising recycling in India through the generation of plastic credits" has met all rules, Plastic waste reduction standard /B01/ and applied for the Plastic Waste Methodology (for PWRM0002 Plastic Waste Mechanical Recycling Methodology, v1.1). During the validation and verification process conducted by Carbon Check (India) Private Limited, Management Representatives of Banyan Nation, had also demonstrated that their compliance meeting with the requirements of VERRA Plastic waste reduction standard /B01/ and the applied PWRM0002 v1.1 methodology /B03/.

During the discussion with the Management Representatives of Banyan Nation as well as verification and validation process, it was found that the project is a grouped project, meaning that project activities can be added after validation, if they meet the criteria outlined in the Joint project description and monitoring report and that the same technology is used.

2.1.3 Project Configuration

Plastic Waste is being collected from across different cities in India /33/. The indication of the project activity location and the geographic boundaries is provided in section 1.11. of the Joint PD and MR v1.6 /01/. They are in accordance with paragraph 3.7.1 of the Plastic waste reduction Standard /B01/ and VVB can confirm that the project activity boundary is uniquely defined.

The Joint PD and MR v1.6 /01/ clearly indicates the project scope, which is as per the requirements of Plastic Waste reduction standard /B01/. The applied methodology's baseline scenario is clearly and transparently documented in section 3.5 of Joint PD and MR v1.6 /01/, accurately reflects the plastic waste situation in Hyderabad. According to the Telangana Pollution Control Board's 2019 data (reference to the link provided in the Joint PD & MR v1.6 /01/), the city generates a substantial amount of plastic waste daily, amounting to 517.8 tonnes, or approximately 188,997 tonnes annually (reference to the link provided in the Joint PD & MR v1.6 /01/). Considering the per capita plastic use, as per the reference provided in Joint PD & MR v1.6 /01/, Hyderabad faces the challenge of managing 108,000 tonnes of plastic waste for its nine million population, highlighting the overwhelming plastic waste problem. The 1st PAI focuses on recycling of plastic waste, with the baseline scenario assuming that without project implementation, the plastic waste would have remained in the environment, subject to open burning, incineration without energy recovery, or disposal in dumpsites. This baseline scenario complies with the requirements outlined in section 6 of the applied methodology PWRM0002, Version 1.1./B03/.

Eligibility criteria of the grouped project activity:

The eligibility criteria have been provided clearly in section 1.3 of the Joint PD and MR /01/ and then justification provided for inclusion of project activity instances as per Plastic standard version 1.0 /B01/.

Sr. No.	Eligibility criteria	Project activity instances eligibility	VVB assessment
1	The project activity instances shall meet applicability conditions for applicable methodology.	All project activity instances meet applicability conditions of the methodologies applied, hence this eligibility criteria are fulfilled.	Please refer section 3.2 of this document for methodology applicability criteria.
2	Use the technologies or measures specified in the project description that are relevant to the project activity	All project activity involves in recycling of plastic waste only hence this eligibility criteria is fulfilled.	Please refer section 1.9 of this document for technology and measures.

3	Apply the technologies or measures in the same manner as specified in the project description	The technologies and measures will be applied in the same manner as described in project description for all the project instances. Hence this condition is fulfilled.	Please refer section 1.9 of this document for technology and measures.
4	Are subject to the baseline scenario determined in the project description for the specified project activity and geographic area	All project activity instances have same baseline scenario as per the applied methodology. Hence, this criterion is fulfilled. Please refer section 3.5 Plastic Waste Collection and/or Recycling Baseline Scenario of this document.	As per Joint Plastic Project Description and Monitoring Report /01/, VVB conforms that the project activity instances have same baseline scenario as per the applied methodology.
5	Have characteristics with respect to Additionality that are consistent with the initial instances for the specified project activity and geographic area. For example, the new project activity instances have financial, technical and/or other parameters (such as the size/scale of the instances) consistent with the initial instances, or face the same investment, technological and/or other barriers as the initial instances	The additionality for the all-project activity instances included in the grouped project has been demonstrated in section 3.6 of this document.	Please refer section 3.6 of this Joint PD&MR v1.6 document
6	Occur within one of the designated geographic areas specified in the project description	All project activity instances being included in the grouped project are located within geographic boundaries of India. Hence this condition is fulfilled.	Based on the onsite interview and as per Joint Plastic Project Description and Monitoring Report /01/, VVB conforms that all project activity instances being included in the grouped project are located within geographic boundaries of India.

			Hence, this eligibility criteria are fulfilled.
7	Have evidence of project ownership, with respect to each project activity instance, held by the project proponent from the respective start date of each project activity instance (i.e., the date upon which the project activity instance began collecting and/or recycling plastic waste)	The project has been owned by Banyan Nation and VNV. Hence, this condition is fulfilled.	The 1st PAI, as indicated by its registration license /03/, is the owner of the project activity with the start date 05/02/2020 of the project activity instance began recycling plastic waste. Furthermore, VNV collaborates /32/ with Banyan Nation as the project proponent and carbon finance party.
8	Have a start date that is the same as or later than the grouped project start date	The start date of the project activity instances will be on or after the project start date i.e., 05/02/2020. Hence, this condition is fulfilled.	As per consent order the start date 05/02/2020 of the project activity instance began recycling plastic waste./13/. Hence, this eligibility criteria are fulfilled.
9	Be eligible for crediting from the start date of the instance through to the end of the project crediting period (only). Note that where a new project activity instance starts in a previous verification period, no credit may be claimed for plastic waste collected or recycled by the project during the previous verification period and new instances are eligible for crediting from the start of the next verification period	The start date of crediting period will be on or after the project start date i.e. 05/02/2020. Hence, this condition is fulfilled.	As mentioned in the Joint PD and MR /01/, VVB conforms that the start date of crediting period will be on or after the project start date i.e., 05/02/2020. Hence, this condition is fulfilled.

2.1.4 Project Proponent and Other Entities Involved in the Project

In the project there are two project proponent /32/ who are responsible for entire project activities, and this is well described in the Joint PD and MR v1.6 /01/ and no other entities are involved in the project. Other stakeholders have been interviewed to confirm their role amongst others.

Organization name	Banyan Sustainable Waste Management Private Limited (Banyan Nation)
Contact person	Rashi Agrawal
Title	Director, Partnerships
Address	IIIT, T-Hub, Professor CR Rao Rd, Gachibowli, Hyderabad, Telangana 500032
Telephone	+91-8886001059
Email	ragrawal@banyannation.com

Organization name	Value Network Ventures Advisory Services Pte. Ltd (Carbon finance party)
Role in the project	PP representative and Consultant
Contact person	Mr. Sandeep Roy Choudhury
Title	Director
Address	10 Anson Road, #29-07 International Plaza, Singapore-079903
Telephone	Cell : 91 9844331288 Direct : 91 80 42429933
Email	contact@vnvadvisory.net

2.1.5 Ownership

Banyan Nation, as the parent firm and project proponent (PP), holds the ownership to control and manage the 1st PAI /03/. Additionally, VNV, being responsible for carbon finance /32/, also acts as a co-proponent alongside Banyan Nation. Banyan Nation exclusively owns and oversees the recycling activity. The project proponent (PP) has duly provided the ownership documents, titled Banyan Nation development ownership confirmation over the "Incentivising recycling in India through the generation of plastic credits" /09/, in compliance with Section 3.4.1 of the Plastic Waste Reduction Standard V1.0 /B01/.

Furthermore, there are extended producer responsibility (EPR) schemes that pertain to the project's specific activity and types of materials. Within the framework of the EPR scheme stipulated in the plastic waste management rules, Banyan Nation has distributed EPR credits for the recycled plastic waste to 3rd party M/s Paperman Environmental Solutions Pvt. Ltd. /22/. The quantities utilized for the credited allocations are detailed in the monitoring report /10/. Additionally, PP has furnished a declaration to guarantee the prevention of any duplication in the tallying of recycled plastic within the project /22/.

2.1.6 Project Start Date

The project start date for project entitled, "Incentivising recycling in India through the generation of plastic credits" is the date from which facility has become operational i.e. 05/02/2020. The start date of the project was verified with the consent order /03/ for operation received from the government by Banyan Nation as well as commissioning certificate /05/ provide by the PP. This was again crosschecked with the stakeholders during the onsite visit.

2.1.7 Project Crediting Period

The project crediting period is 7 years. The project has the opportunity to renew twice, each time for seven years, up to 21 years total. The crediting period starts from 05/02/2020 /03/ to 04/02/2027, which was coincides from the starting date of the project activity /03/, and last for 7 years. This has been cross checked with the VVB by reviewing the commissioning certificate/05/ provided by the PP and found that the same is in accordance with section 3.6 of the Plastic waste reduction standard version 01.0 /B01/.

2.1.8 Estimated Collected and/or Recycled Plastic Waste

The initial quantity of plastic waste recycled, and the estimated annual addition quantity of waste to be recycled are described in the Joint PD & MR v1.6 /01/. The total quantity of plastic waste is being recycling in the facility is falls under the material type High-Density Polyethylene (HDPE) and Polypropylene (PP) mentioned in section 2.1.1 of Plastic Waste Reduction Standard, version 1.0 /B01/. The project recycled plastic waste was estimated based on the monitored batches of plastic recycling and the project's anticipated plan for expansion.

The numerical values described in the Joint PD & MR v1.6 /01/ for quantity of plastic waste recycling were cross verified through the supporting document provided by the PP i.e., Estimated plastic credit spreadsheet /02/. The calculation sheets that were used for the calculation in the estimates, in which the monitored and projected data is aggregated, were reviewed and recalculations were performed to confirm the final estimates.

Based on the findings of the validation and verification process, the project team concluded that the estimated recycled plastic waste mentioned in Joint PD & MR v1.6 /01/ is in conformance with the requirements in section 3.11 of Plastic Waste Reduction Standard, version 1.0 /B01/.

The estimated quantities listed in the tables below are based on verification conducted during site visits for the period from 2020-2021 to 2022-2023. For the subsequent period from 2023-2024 to 2026-2027, the estimated quantities are derived from the provided estimated plastic credit spreadsheet /02/.

Estimated recycled plastic waste for HDPE:

Year	Estimated Net Recycled Plastic Waste (tonnes)
2020-21	2500
2021-22	2500
2022-23	3500
2023-24	8000

2024-25	8000
2025-26	11000
2026-27	11000
Total estimated amount	46500
Total number of crediting years (where applicable)	7
Average annual amount	6643

Estimated recycled plastic waste for PP:

Year	Estimated Net Recycled Plastic Waste (tonnes)
2020-21	1000
2021-22	1000
2022-23	1500
2023-24	2000
2024-25	2000
2025-26	4000
2026-27	4000
Total estimated amount	15500
Total number of crediting years (where applicable)	7
Average annual amount	2214

Total Estimated recycled plastic waste:

Year	Estimated Net Recycled Plastic Waste (tonnes)
2020-21	3500
2021-22	3500
2022-23	5000
2023-24	10000
2024-25	10000
2025-26	15000
2026-27	15000
Total estimated amount	62000
Total number of crediting years (where applicable)	7
Average annual amount	8857

2.1.9 Project Location

The recycling facility for the project is established in Hyderabad, India, and the geo coordinates of the recycling plant in Hyderabad, India are 17°31'56.9" N, 78°10'41.9" E. The 1st PAI location and geographic boundaries are designated in the KML files attached as part of this document /07/. During the validation and verification, team reviewed the section 1.11 of the Joint PD and MR v1.6 /01/ and verified the coordinates during the on-site inspections. The same has also been confirmed through interviews with the stakeholders during onsite audit for the project activities.

Based on the outcome of the validation and verification as well as interviews of stakeholders, team can confirm that the location of project activities is in India which is well under the designated geographical locations as indicated in the KML file.

2.1.10 Conditions Prior to Project Initiation

Despite of the existence of waste management laws and regulations as well as the implementing agencies, there is lack of proper collection and recycling of plastic waste in India. The reason behind this is, most stakeholders involved in the plastic waste management sector in India are in unorganized manner leading to lack in the proper collection practices as well as its recycling. This results in disposal of plastic waste to dumping sites and leakage of plastic waste to water bodies due to which Water Quality, Biodiversity, and Ecosystem Health are being endangered as a result of the influx of trash in the water bodies and soils.

Prior to the implementation of the project, the situation of plastic waste management in Hyderabad is also in the similar condition. The waste pickers involved in waste management were lack of the necessary knowledge for the segregation of plastic waste as well as differentiate between various types of plastics, which resulting in the contamination as well as mixing of different kinds of plastic waste, which subsequently reduces recycling efficiency and the quality of the recycled products. Sources cited by the Project Proponent were cross checked and found to be credible and reliable.

The Joint PD and MR provide detailed insights into these challenges, and the team also confirmed and validated these facts during their on-site audit.

2.1.11 Compliance with Laws, Statutes and Other Regulatory Frameworks

India has enforced plastic waste management rules /B05/ that establish guidelines and regulations for facilities engaged in plastic waste recycling. The project activity adheres to the applicable laws, statutes, and regulatory frameworks outlined in India's plastic waste management rules. Following thorough verification of plastic waste registration certificate /13/, it has been confirmed that the project remains in full compliance with all Indian laws, statutes, and regulatory frameworks, with no violations detected.

Furthermore, there are extended producer responsibility (EPR) schemes that pertain to the project's specific activity and types of materials. Within the framework of the EPR scheme, stipulated in the plastic waste management rules, Banyan Nation has distributed EPR credits for the recycled plastic waste to 3rd party M/s Paperman Environmental Solutions P Ltd /22/. The quantities utilized for the credited allocations are detailed in the monitoring report /10/.

Additionally, PP has furnished a declaration to guarantee the prevention of any duplication in the tallying of recycled plastic within the project /22/.

2.1.12 Additional Information Relevant to the Project

No additional information with regards to the project entitled, "Incentivising recycling in India through the generation of plastic credits".

2.2 Stakeholder Engagement

2.2.1 Stakeholder Identification

To identify the stakeholders, the guidelines outlined in Section 3.13.1 of the Plastic waste reduction standard /B01/ was followed. During validation and verification process VVB found that a comprehensive approach was taken to identify all the relevant stakeholders of the project. This involved mapping out of the area and documentation for identification of potential project stakeholders, for their interests, impact, and potential negative influences on the initiative before consideration. The stakeholder identification process was deliberately gender-inclusive and participatory, ensuring equal involvement of men, women, and marginalized groups, including informal waste collectors, who are directly or indirectly affected by the project.

The validation and verification team's own analysis of (potential) impacted stakeholders (among others through cross checking and stakeholder interviews) did not lead to different results and no new (potential) stakeholders were identified through the stakeholder interviews and on-site activities during the validation/verification.

Following this assessment conducted, it is concluded that the stakeholder identification process has proven to be effective to identify all (potential) stakeholders, and the approach to stakeholder identification is deemed appropriate for the project's context.

2.2.2 Stakeholder Description

The following key stakeholder groups have been identified, by the PP, who are involved in the project activities and invited for active participation during the stakeholder engagement process:

1) Informal Waste Workers: These are dedicated waste workers and scrap dealers who operate informally but play a crucial role in collecting, supplying, and segregating mixed plastic waste.

2) Project Employees: This essential group is responsible for managing, documentation, monitoring, and evaluation of all project activities. They facilitate seamless coordination and communication among stakeholders to ensure the project's smooth operation.

3) Third Party Buyers: These are the primary buyers of direct-value materials, receiving the plastic materials in the form of granules for further processing their products.

4) Service Providers for Recycling: This group comprises various service providers within the plastic recycling value chain, including material suppliers viz. masterbatch and washing chemicals and support services providers viz. construction and maintenance.

5) Recycling Facility Employees: Mainly consisting of local communities, this group leads the operation and maintenance of the recycling facility, playing a pivotal role in the overall project.

6) Local Government Representatives: The support of local government representatives is crucial in various aspects, including stakeholder identification and outreach, ensuring broader awareness of the project's impact, and contributing to its long-term sustainability.

Additionally, the meeting included key suppliers. Due to travel constraints, the meeting was conducted in a hybrid format, accommodating some stakeholders in person and others via MS Teams to facilitate their participation.

2.2.3 Stakeholder Consultation

Stakeholder identification was followed by inviting relevant stakeholders using verbal and digital communication methods. Key suppliers, service providers, and recycling facility employees received invitations through phone calls and emails, while local stakeholders, including informal waste workers, were personally visited with the help of Banyan Nation's local procurement officers this is confirmed during the site visit to the informal waste workers. Invitations are sent a few days before the Stakeholder Consultation meeting /11/ with detailed agendas, encouraging maximum participation and input sharing from stakeholders to understand the project better.

Local Stakeholder Consultation Meeting

The 1st PAI stakeholder consultation meeting was conducted on 12/07/2022 in Hyderabad, India, in line with the requirement of Plastic Waste Reduction Standard /B01/. Following are the list of participants who attended the LSC meeting conducted on 12/07/2022, at Banyan Nation from 11:30 AM onwards through the MS Teams.

- Chetan Gowda, Build Manager, (Eco Labs) - cleaning and sanitation.
- Ithiyaz, Financial Advisor to Banyan Nation
- Saurya Pratap Singh, Project Coordinator, Banyan Nation
- Rashi Agrawal, Director, Business Development, Sales and Compliance, Banyan Nation
- Manjari Chandra, Priyanka Mhaisne, Madhureema Auddy, Portfolio team, VNV Advisory Services

After providing an overview of Banyan Nation's profile and motivation, the company presented the methods and technologies being utilized for plastic recycling. The participants were informed about the final recycled products and the company's collaborations for supporting effective implementation. Stakeholders were encouraged to share feedback on how plastic credits issuance and additional funding for plastic collection and recycling operations could enhance their activities. The session also covered an explanation of VERRA plastic credits, the acquisition processes, and their overall benefits, aiming to educate stakeholders on this aspect and its significance in addressing urban plastic management challenges. The goal was to inform stakeholders about the project objectives and implementation, and all received feedback is carefully evaluated by a Banyan Nation representative to identify the gap areas and potentials for the improvements in the program. This information was confirmed by meeting minutes shared by the PP /11/ and interviews conducted with stakeholders conducted during the on-site audit.

Informal one-on-one meetings with waste pickers/ suppliers

The waste pickers and scrap dealers were unable to attend the LSC meeting held on 12/07/2022. Aiming to ensure integration of their inputs into the project, Banyan Nation team reached out to these groups separately where the team held informal one-on-one meetings with the informal waste pickers/ suppliers and scrap dealers.

Following is the list of informal waste pickers/ suppliers who were consulted separately after the LSC meeting by the Banyan Nation team:

- Jalpath Reddy- Shri Venkateshwara Plastics- Proprietor (Informal waste supplier)
- Hussain- Proprietor (Informal waste supplier)
- Raju- Proprietor (Siddartha Plastics - Informal waste supplier)
- Parvathalu- Proprietor (Shri Mallikarjuna Plastics- Informal waste supplier)

Here, the waste suppliers learnt about the details of the project, its feedback mechanism in place and provided their inputs on the same during the meetings.

This information was confirmed by the meeting minutes shared by the PP /11/ and interviews conducted with stakeholders conducted during the on-site audit.

Pictures of the Banyan Nation team involved in LSC meetings

2.2.4 Free, Prior and Informed Consent

Banyan Nation, as the parent firm and project proponent (PP), holds the ownership to control and manage the 1st PAI /03/. Hence there is no property right was affected by the project.

2.2.5 Continued Consultation and Adaptive Management

A continuous grievance mechanism /11/ is established in the facility to facilitate ongoing communication and consultation between the project proponent and stakeholder groups regarding the project and its impacts. Throughout the project's duration, stakeholder input will be actively sought and considered, with management adjustments made accordingly. An accessible register /11/ is in place for filing complaints about ongoing operations, and these complaints are addressed during management review meetings to find suitable solutions. Additionally, a compliant box is made available in the recycling facility to records the complaints/feedbacks of the employees /11/. The feedback and grievances received from waste workers is conveyed to Banyan Nation's management. Banyan nation has a grievance redressal

committee /11/ in place which takes a monthly review meeting related to the received grievances and for continued communication and consultation.

This information was confirmed by VVB team through on-site inspection and interviews with the stakeholders as well as through documents/procedures review.

2.2.6 Anti-Discrimination

The PP has a documented discrimination and sexual harassment /21/ manual, which Captures handling and reporting instances of sexual harassment. The validation and verification assessment team reviewed and analysed project-development and implementation documentation on discrimination and sexual harassment /21/. To verify the accuracy of the information provided in the project proponent's policy documentation, on-site interviews with marginalised and stakeholders were also conducted. The assessment team also found that the project proponent has established procedures /21/ for handling and reporting instances of sexual harassment and discrimination in their policies.

This information was confirmed by VVB team through on-site inspection and interviews with the stakeholders as well as through documents review.

2.2.7 Feedback and Grievance Redress Procedure & Accessibility

The validation and verification assessment team thoroughly examined the project feedback /11/ and grievance redress procedure documentation /11/. Additionally, they conducted interviews with various stakeholders to gauge their comprehension of these procedures. Based on these comprehensive assessments of documents /11/, the validation and verification team concluded that the project proponent has established and implemented transparent feedback and grievance redress procedures for effectively addressing any disputes that may arise during project planning and implementation.

2.2.8 Stakeholder Access to Project Documentation

The project proponent makes project documentation available to all project stakeholders, stakeholder groups and interested parties by providing the access through the email request for the project documents. This information was confirmed by VVB team through the face-to-face interviews conducted with the sampled project stakeholders during onsite visits. Furthermore, they will be further explained about the project documents in a simpler way to understand the process in more details.

2.2.9 Information to Stakeholders on Validation and Verification Process

The validation and verification assessment team conducted in-person interviews with stakeholders on-site to gauge their comprehension of the validation and verification audit process, which had been communicated to them during the meetings.

2.3 Safeguards

The program aims to reduce the amount of plastic waste that stays within the environment through the recycling of as much plastic waste as possible to limit the impact on nature. The

program aims to cut down the quantity of the plastic waste that is being dumped at landfills and leaking to water bodies viz. rivers, oceans, etc. as well as utilization of recycled plastic to replace the virgin plastic.

2.3.1 Health and Safety

The project activity within the project boundary poses no potential health impacts since it involves the recycling of plastic wastes into plastic pellets without emission of any hazardous gases or effluents. Apart from this project activity also prevents indiscriminate disposal of plastic waste at landfills and in water bodies. Standard Operating Procedures (SOPs) /20/ are in place to ensure proper machine handling, minimizing any potential accidents related to health and safety. To further safeguard workers, they are provided with PPE kits viz. hand gloves, hair nets, and face masks, as well as providing regular training and briefings /20/ on health and safety risks associated with direct waste contact.

During the on-site audit, the workers were interviewed, and the training records /20/ provided by the project proponent were cross-checked to confirm the implementation of these safety measures.

2.3.2 Labor

During the on-site visit, it was confirmed that the Banyan Nation complies with labour and human rights laws and practices applicable in the host country. Employees at the Banyan Nation recycling plant are at least 18 years old. As a result, they are opposed to child labour. Furthermore, the organization provides trainings /20/ on different aspects of the project activities. Also provides retirement benefits and health insurance /14/ to its employees, setting a high standard for social responsibility that is unheard of in a largely informal industry.

The above information was confirmed through observations made and interviews conducted with the stakeholders during on-site visit and through documents desk review of the documents provided by the PP.

2.3.3 Energy Efficiency and Greenhouse Gas Emissions

The project is consuming electricity from the grid which is generated from fossil fuel leading to 2694 tonnes of emission. The Project does not have energy recovery under its scope. The plant is a new start up and hence there are no energy efficiency measures undertaken currently. However, PP has a biomass powered boiler for providing hot washing and is planning to adopt measures in future which will be mentioned during subsequent monitoring period.

The above information was crosschecked during the on-site visit through making the observations on the processes and conducting interviews with the stakeholders.

2.3.4 Condition of Natural Resources

The project will have no effect on quality of air, water and soil of the surroundings and will also not affect the biodiversity, or endangered species of any kind as there is no emission of hazardous gases and effluents in the process. The project involves recycling of plastic waste into plastic pellets for their reuse and to prevent their indiscriminate disposal at landfills, which could affect the quality of the soil, and leakage in rivers, oceans, etc., which could affect the quality of

the water as well as incineration of plastic waste which could affect the quality of air. Hence, the implementation of the project will not be impacting on the quality of air, water, and soil in a negative manner, but it will be preventing the leaching of the chemicals, microplastics and degrading plastics into soil due to the disposal of plastic waste at landfills. The threatened and endangered species are further protected as well due to the reduction in the plastic pollution which is harmful to the wildlife and other organisms.

The above information was verified through the observations made during the on-site visit and conducting interviews with the stakeholders.

2.3.5 Additional Impact Certifications

Banyan Nation has not applied any additional impact certifications for project entitled, "Incentivising recycling in India through the generation of plastic credits".

2.4 Application of Methodology

2.4.1 Title and Reference

The project has applied PWRM0002 Plastic Waste Mechanical Recycling Methodology Version 1.1. /B03/ and Tool 01: Tool for the demonstration and assessment of additionality is applied to prove the project is additional.

2.4.2 Applicability

The eligibility criteria have been provided clearly in section 3.2 of the Joint PD and MR /01/ and then justification provided for inclusion of project activity instances as per Plastic waste reduction standard version 1.0 /B01/.

Here are the applicability criteria of PWRM0002 Plastic Waste Mechanical Recycling Methodology Version 1.1. /B03/.

Applicability criteria PWRM0002	Justification in Joint PD and MR	VVB team assessment
1) Project activities result in mechanically recycled plastic waste through one or more of the following: (a) new facility (b) Capacity addition (c) incentivising and facilitating an increase in collection and/or sorting of plastic to enable an increase in recycling	The project activity involves installation of a new recycling facility. Hence, criteria a) is applicable. The same can be verified from consent order of operation.	VVB has found that the project involves in installation and operation of a new mechanical recycling facility for collected plastic waste. The above statement was confirmed during on-site visit and through document review.
2) The plastic waste being recycled is either collected or diverted from: a) The	The plastic waste being recycled is collected or diverted from the	This was checked during the site visit and by cross checking the documents i.e.,

environment; b) Landfill; c) Open burning; d) Incineration with energy recovery; e) Households and/or commercial entities; f) Incineration without energy recovery; or g) Any other waste management option that does not allow for a second life of the plastic waste	environment (Unorganized dumpsites, water bodies, and open land), waste management agencies and from the households and/or commercial entities. Hence, criteria a), e) and g) is applicable.	purchasing and selling invoices /12/, and VVB found that the information provided by the PP was correct.
3) Project activities include mechanical and/or chemical recycling as defined in the latest version of the Plastic Program Definitions.	The project activity is a mechanical recycling facility where the post-consumer types of waste i.e., rigid polyolefin plastic like HDPE and PP is being recycled. This plastic waste is subjected to a series of processes to produce the recycled granules as per customer/standard requirement.	On the basis of review of the Joint PD and MR /01/ it was confirmed that the project involves the installation and operation /05/ of a new mechanical recycling facility for collected plastic waste.
4) The plastic waste stream is sorted before it enters the recycling process. The project proponent must provide a sorting description (i.e., documentation of the sorting process implemented by the sorting facility prior to the recycling process). The sorting process must result in a plastic waste stream (homogeneous or heterogeneous) that is appropriate for the recycling technology used in the project. The sorting description must include the following: a) Source of the plastic waste (e.g., household, industrial entity); b) Technologies and methods used to sort the plastic waste; c) Detailed description of the sorting criteria; and d)	The waste plastic (HDPE and PP) bottles in bailed and loose form are collected from the scrap vendors, aggregators which is being sorted manually. Once the material reaches the warehouse, it goes through rigorous checking to provide feedback to suppliers. A final sorting is carried out on the washing line where the bottles are shredded, washed through a series of thermal and chemical processes, and then aspirated for label separation and dried. Cleaned and dried flakes are extruded using the FDA approved EREMA vented extruder. Following is a stepwise detail on sorting process:	This was checked during the site visit and cross checked with the provided technical information /27/ of the machinery installed in the recycling facility.

Expected material composition of output waste streams post-sorting, according to material types defined in the latest version of the Plastic Standard. Technologies and/or methods for sorting plastic waste include, but are not limited to, manual sorting (i.e., based on color, size or other physical features), automatic sorting techniques (e.g., near infrared, X-rays), electrostatic sorting, sink-float separation and selective dissolution. This methodology does not prescribe or limit the technology and/or method used to sort plastic waste. Credible evidence such as manufacturer specifications or good practice guidance (GPG) must be provided to demonstrate that the technology and/or method used to sort plastic waste is appropriate for the collected plastic waste and the technology or technologies used to recycle the plastic waste.	1. Material fed in the feeding conveyor is conveyed to the sorting bench for manual sorting. 2. Metal detector- Raw material passing through the metal detector will stop at the metal detector zone if some metal contaminants are detected.	
5) Plastic waste intended for recycling is not mixed with hazardous materials or substances (e.g., coatings, adhesives or colorants) that could become unsafe if compressed, combined or exposed to high temperatures during the recycling process. If the plastic waste contains hazardous materials or substances, it must be treated following relevant national, regional and local	The recyclable plastic waste is not combined with any potentially harmful substances.	During the on-site inspection interviews with the stakeholders, this was conformed that the Plastic waste intended for recycling is not mixed with hazardous materials or substances.

regulations, industry best practices and/or internationally or nationally available GPG before entering the recycling process.		
6) It is possible to directly measure and record the final output of the recycling facility (i.e., the weight of recycled plastic waste or any other kind of raw material derived from plastics using chemical processes) segregated by material type as defined in the latest version of the Plastic Standard. Where the output is of a chemically decomposed form of plastics and the material type can no longer be determined (i.e., in the case of chemical recycling), the material type must be determined based on the input to the depolymerization process, using a mass balance approach.	The project has recording process in line, the dry weight of the final output of the recycling facilities will be recorded and monitored.	VVB has observed during the onsite visit that the different types of plastic are recycled separately, and the final output of the recycling facilities is measured and recorded. The plastic, after being recycled into pellets, is placed into bags of different weights for sale to plastic product manufacturers which was also checked through the logbooks. /18/.
7) The quality of the recycled plastic waste allows it to be used as feedstock in the manufacture of recycled products, thereby displacing the use of virgin plastic. Properties of the output of the recycling facility (e.g., presence and/or type of contamination, characteristics of macromolecules, chemical stability) may be used to demonstrate quality. Only the fraction of the output of the recycling facility that is or can be used to produce recycled plastics is eligible for WRCs. Any output that is used as a fuel, for energy recovery	Quality checks of the recycled plastic granules are done both in-house as well as by external NABL accredited labs on the parameters like Melt flow (190C/2.16KG), flexural length, Tensile strength, odour, colour, density, etc. The test reports will be provided for the same. No output that is used as a fuel, for energy recovery and/or as a chemical for plastic production.	The recycled plastic quality that allows feedstock is confirmed through the review of inhouse laboratory analysis and 3rd party analysis reports /19/. Also, waste was sold to the local manufacturers, this was confirmed by the VVB by cross checking sales invoices /12/. Thus, the eligibility criteria have been met for the 1st PAI under this group project.

and/or as a chemical for any purpose other than plastic production is not eligible for WRCs. Credible evidence such as contractual agreements, receipts of sale of recycled material, third-party audits, third-party survey results or chain of custody certification (e.g., ISCC PLUS) must be provided to demonstrate compliance with this applicability condition. In all cases, credible evidence must be provided from a source that can be verified by the validation/verification body (VVB).		
8) There is recyclable plastic waste available in the region that would not have been recycled in the absence of the project. Availability of recyclable plastic waste may be demonstrated by, among others, using the most recent publicly available data on plastic waste generation and recycling rates in the region to show that there is plastic waste that is not being recycled.	In the pre-project scenario, plastic waste management sector was unorganized and plastic waste was not being collected or recycled in a proper manner. The plastic waste was being disposed directly into the landfill. In 2015, scientists said that "of the nearly 7 billion tons of plastic waste generated, only 9% was recycled, 12% incinerated, and 79% accumulated in landfills or the environment which accounts for almost 18% of the world population in 2.4% of the global land area[1]. Before the project activity, the price that aggregators got per kg plastic was not more than 20 INR. The rate was not economical so,	On the basis of the review of information provided in the Joint PD and MR /01/, reference articles[1] & data available in public domain on the plastic waste[2], VVB confirms that there is no recycling facility prior to the implementation of the project.

[1] https://www.thehindu.com/opinion/op-ed/beating-plastic-pollution/article24213220.ece

	aggregators were not actively involved in collection of plastic waste. Considering baseline of India included in the project average per capita consumption of plastic is projected to go up from 11 kg in 2014-15[2] . As per survey done by CPCB for major cities include 92.416 Kg Plastic waste /MT MSW was generated in Ahmedabad, 84.83Kg Plastic Waste/MT MSW was generated in Bangalore, average PW of 94.73 Kg/MT MSW is generated in Coimbatore, average PW was generated about 47.46Kg/MT MSW in Hyderabad. Plastics were assessed as with an average of 95.42 Kg/MT MSW in Chennai. Jaipur generated average PW of about 50.26 Kg/MT MSW. The average plastic generation of 116.09 Kg/MT MSW in Kolkata. Majority of this plastic is HDPE/LDPE[3]. The Plastic Waste was burnt along with MSW in open dumpsites.	
9) Project activities that include any depolymerization of sorted plastic waste streams must justify why the materials in the sorted plastic waste stream cannot be recycled using any other technology or technologies resulting in a smaller relative	The Project does not include the depolymerization of sorted plastic waste.	On the basis of review of the Joint PD and MR /01/ and on-site audit, VVB confirmed that the project does not include any depolymerization of sorted plastic waste streams.

[2] https://www.thehindu.com/sci-tech/energy-and-environment/where-does-india-stand-on-plastic-waste/article29310525.ece

[3] https://cpcb.nic.in/displaypdf.php?id=cGxhc3RpY3dhc3RlL1BXXzYwX2NpdGllc19yZXBvcnQtSmFuLTIwMTUucGRm

reduction in (macro) molecular mass.		
10) The project activity does not compete with other recycling activities or include plastic waste that has been diverted from a historically existing, legally recognized recycling activity. Evidence, such as proof of how the plastic waste was managed over the three-year period prior to implementation of the project activity, must be provided to demonstrate that the project activity does not divert plastic waste from any historically existing, legally recognized recycling activity.	The project activity does not compete with other recycling activities or includes plastic waste that has been diverted from a historically existing, legally recognized recycling activity. Before Banyan existed, plastic collection and recycling sector was unorganized.	On the basis of review of the Joint PD and MR /01/, in which PP had clearly described referring to reliable sources about the recovery percentage, PP can confirm that the recovery percentage in India is below 20%. In Hyderabad, the survey was conducted at Jawaharnagar dumpsite, which has the average total MSW generation was around 4200 MT/Day out of the average Plastic waste was generated about 47.46Kg/MT. From the study data it has been observed about 63.21% of plastic waste was obtained from the recycling which is of HDPE/LDPE Material. In Hyderabad, the MSW collected from various locations of city are transported to Jawaharnagar dumpsite where 50 families of rag pickers are living nearby dumpsite and segregating the plastic waste and selling to the recyclers. Therefore, the project activities do not compete with other collection activities.
11) Plastic waste that enters the project recycling facility but is not recycled or is lost during the recycling process (e.g., due to contamination) is	Plastic waste that enters the project recycling facility but is not recycled or is lost during the recycling process will be sold to other plastic	It was observed by VVB during the site visit to the recycling facility that the materials which are not recycled, or the waste

managed in a way that does not include dumping on open land, in water bodies and/or at dumpsites; open burning; or incineration without energy recovery. Where a project can reasonably only access one of these excluded end destinations, the project proponent must demonstrate that the nature of the end destination is comparable to the plastic waste source and must provide justification for why the project is not reasonably able to access an alternative end destination. In all cases, open dumping of plastic waste onto open land or into water bodies is not permitted. If the plastic waste that was not recycled in the facility or the waste from the recycling activities contain hazardous substances, the waste must be managed through environmentally and socially appropriate technologies and processes in accordance with relevant national, regional or local regulations or guidelines.	recyclers who make various products – about 10% of plastics that are rejected. The same can be cross-checked from scrap sale invoices. It will avoid dumping on open land, in water bodies and/or at dumpsites; open burning; or incineration without energy recovery.	materials left after recycling is sent to the other recycling facilities or treated before disposal. This has also been cross-checked through the contract between the Banyan Nation and other party Ramky /15/
This methodology is not applicable under the following conditions:		
12) The plastic waste to be recycled has been collected in and imported from other countries, except in either or both of the following circumstances: a) The project recycles plastic waste (using sustainable waste management practices) imported from a Least Developed Country (LDC) or Small Island Developing State (SIDS). b) The project imports	Plastic waste is not imported in the current project activity. Hence, this is not applicable.	As mentioned in the section 1.11 (Project Location) of Joint PD and MR /01/ the grouped project activity does not involve any import from other countries. The source and end destination of the plastic waste is in India. Based on the review of documents, VVB conforms that this eligibility criteria are fulfilled.

plastic waste from other countries for further processing where there is insufficient plastic waste available in the exporting country to enable development of recycling infrastructure at the time of project validation. Project proponents must demonstrate the same through primary surveys or secondary literature available in the public domain and/or certified by a competent authority. Where either or both of the above circumstances exist, a robust and transparent chain of custody from the source of plastic waste to the end destination of the project activity must be provided.		

2.4.3 Project Boundary

The project focuses on three sources of plastic wastes, households, commercial establishments, and industrials. The plastic waste types of HDEP and PP are recycled into pellets for sale to post-processors.

Source		Material Type	End-of-Life	Explanation
Baseline	Household, unorganized dumpsites and landfills, water bodies	HDPE	Dumpsites, water bodies, Landfills	Major source of plastic waste pollution
		PP	Dumpsites, water bodies, Landfills	Major source of plastic waste pollution
Project	Household, unorganized dumpsites and landfills, water bodies	HDPE	*FMCGs, recyclers*	*Avoidance of indiscriminate disposal due to collection and recycling of plastic wastes and send it to third parties.*
		PP	*FMCGs, recyclers*	*Avoidance of indiscriminate disposal due to collection and recycling of plastic wastes and send it to third parties.*

This information is confirmed by VVB during the on-site audit and by cross checking the documentary evidence provided by PP like sales invoices of the recycled product to 3rd parties /12/.

2.4.4 Project Region

The 1st PAI locations for project activities are described in the Joint PD & MR v1.6 /01/, including KML files /07/. The project recycling facility is in Hyderabad, India. The geo coordinates of the recycling plant in Hyderabad, India are 17°31'56.9"N, 78°10'41.9"E.

The location for project activity was confirmed by VVB during the on-site audit and by cross checking the documentary evidence.

2.4.5 Baseline Scenario

The baseline scenario of the "Incentivising recycling in India through the generation of plastic credits" project represents the plastic waste management activities that would most likely occur in the absence of the project activity within the project region.

The project activity follows methodology designated for establishing baseline scenario in PWRM0002, Version 1.1 /B03/. For establishing the baselines, for each project activity, PP had used historical data from recycling centres in Hyderabad. According to the Telangana Pollution Control Board in 2019, Hyderabad generates approximately 517.8 tonnes of plastic waste daily, totalling about 188,997 tonnes annually. With a population of nine million, the city civic body faces the challenge of managing 108,000 tonnes of plastic waste when considering per capita plastic usage. These varying statistics reflect the severity of Hyderabad's plastic waste issue.

As this project activity is a new undertaking, a baseline of 0 was adopted in accordance with the waste collection methodology.

The baseline is verified by reviewing the literature provided by the project proponent, and the interviews were conducted with the stakeholders during the on-site visit. The baseline calculation was found to be accurate and in full compliance with the methodology's requirements.

2.4.6 Additionality

The project proponent has demonstrated additionality of the grouped project under Section 3.6 of the VCS Joint PD&MR v1.6 /01/ in accordance with the requirements of the methodology given in section 7 of PWRM 0002 v1.1 /B03/. The project proponent has demonstrated regulatory surplus in accordance with the requirements of the applied recycling methodology. The additionalities of the project were properly assessed by CCIPL through the review of the document provided by the project proponent, showing the methodology of additionality of this project via the Demonstration Project Eligibility and Additionality. The project is accepted corresponding with Plastic Standard on collection and recycling activities on the additionality.

The validation and verification team determined that the grouped project is not mandated by law, statute, or regulatory requirement to engage in the recycling of the plastic waste materials. The project proponent is engaging in this project activity under a voluntary basis engage in the recycling of plastic wastes. The project does not fulfil the conditions of step 1 and Step 2 of the decision tree for the demonstration of additionality under PWRM 0002 v1.1 /B03/. The project

is therefore not included in the positive list. However, the project proponent has demonstrated additionality under Step 3a (Penetration Rate) and Step 3b (Investment Analysis) in accordance with the decision trees for demonstrating additionality as illustrated in methodology PWRM 0002 v1.1 /B03/. The project proponent has assessed the penetration rates of the project activity as per the methodology mentioned under Section 3.6 of PWRM 0002 v1.1 /B03/ and found that it is more than 20%. Based on the review sensitivity analysis carried out under step 3b (Investment analysis) substantiates that the investment is not financially attractive (Equity IRR for the project activity is less than the Benchmark). Thus, it is concluded that project activity is additional.

VVB had crosschecked the investment analysis /34/ sheet to check its authenticity and suitability of investment analysis, financial indicator, and benchmark:

The project proponent has conducted the investment analysis /34/ using “Option III: Apply benchmark analysis,” including the sensitivity analysis, as prescribed in the latest version of the CDM’s Tool for Demonstration and assessment of additionality and Investment analysis.

The benchmark analysis is used for the project activity as per project type and decision-making context. Therefore, the Expected return on equity is considered appropriate benchmark. Accordingly, the post-tax Equity IRR has been considered as the relevant financial indicator for the project activity which is acceptable to the assessment team. Moreover, the financial indicator selected by the PP is correct since tool do not restrict the PP to either use project IRR or Equity IRR. This is under the choice of the PP to select appropriate indicator based on his preferences to know the IRR using his equity investment. Assessment team however checked the Equity IRR calculation and found that input assumptions used for the calculation of Equity IRR are applicable at the time of making decision for investment in the project and thus is in accordance with the relevant guideline of the tool.

When conducting an investment analysis /34/ using nominal terms but with IRR benchmarks provided in real terms, PP are required to transform the real benchmarks into nominal values by incorporating the inflation rate. The inflation rate should be sourced from the host country's central bank inflation forecast for the entirety of the crediting period.

As a result, the default value was adapted by incorporating an appropriate forecasted inflation rate sourced from the RBI (Central Bank of India). The PP determined the Benchmark using the inflation rate forecasted by RBI during the crediting period. It's essential that the inflation forecast should be covered for the entire of the crediting period when making the Investment decision. Nonetheless, as the RBI offers inflation forecasts solely for 5- and 10-year periods, the PP computed the benchmark using a 10-year duration, which then serves as the project activity's benchmark. During the review of the documents VVB found that, at the time of decision made for investment in the project activity, Version 9.0 of methodological tool "Investment Analysis" was the latest available tool to PP, hence PP has considered the same tool for default value of return on equity. As per para 19 of the tool referred above, the cost of equity is determined by selecting the values provided in the Appendix, i.e., Default values for cost of equity (expected return on equity) is presented below:

Appendix in tool specifies default value of expected return on equity in real terms for Waste Handling and disposal Industries (Group 1) in India = 10.24%.

The Required return on equity (benchmark) was computed in the following manner:

Nominal Benchmark = {(1+Real Benchmark) * (1+Inflation rate)} – 1

Where: -

Default value for Real Benchmark = 10.24% (as per Appendix of Investment analysis tool)

WPI forecast = 4.00% (Inflation Rate forecast for by Reserve Bank of India (RBI) i.e., Central Bank of India) for India.

Expected return on equity (in real terms)	10.24%	Default ROE provided in UNFCCC "GUIDELINES ON THE ASSESSMENT OF INVESTMENT ANALYSIS" version 10.0
Long Term (20 years) WPI Forecast	4.00%	https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=17458
Benchmark	**14.65%**	**As per Fisher Formula (https://corporatefinanceinstitute.com/resources/knowledge/economics/fisher-equation/)**

Thus, the benchmark of 14.65% has been considered for the project activity.

Input parameters for cash inflow and outflow:

PP has considered the inflow and outflow of the assumption as average of last three years and the same is verified through the Zoom meeting /35/ under recording as PP raised a concerned of sharing the details as those are considered as confidential. VVB has reviewed the investment analysis by reviewing the spread sheet "Investment analysis Banyan Nation.xls" and also verified all the input valued based on the Zoom meeting /35/ as refereed above and through its sectoral expertise and deemed the same appropriate and thus its acceptable to VVB as additionality demonstration by the project proponent. However, in the opinion of VVB, the documents pertaining to additionality cannot be treated as confidential and any such confidential information (including the IRR sheet "Investment analysis Banyan Nation.xls" and evidence of input parameters) must be provided Project Proponent to VERRA for review.

SENSITIVITY ANALYSIS:

The purpose of the sensitivity analysis is to determine the likelihood of the unexpectable change of a scenario other than the scenario presented, in order to provide a cross-check on the suitability of the assumptions used in the development of the investment analysis.

In the process of conducting the sensitivity analysis, variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation. As per the investment analysis sheet provided by PP, two variables i.e., project cost and O&M has been considered for the sensitivity analysis. During the review of the investment analysis sheet no other variable has significant impact on the analysis.

Variation in project cost	-10%	0%	10%
Equity IRR (20-year cashflow) without plastic credit revenue	10.08%	9.68%	9.22%

Variation in O&M	-10%	0%	10%
Equity IRR (20-year cashflow) without plastic credit revenue	9.71%	9.68%	9.46%

As per the method described in Section 7 of the CDM's Methodological tool 27: Investment analysis, a general point of departure variations in the sensitivity analysis should at least cover a range of +10% and –10%, unless this is not deemed appropriate in the context of the specific project circumstances. Thus, to cross-check on the suitability of the assumptions used in the development of the investment analysis, a general point of departure variation ranging from +10% and –10% has been considered.

Based on the review of the Investment Analysis Sheet /34/, Zoom meeting record /35/ with PP and interview with stakeholders during site visit, VVB concluded that in case of any unlikelihood the equity IRR for the project activity will not breach the Benchmark.

2.4.7 Estimated Collected and/or Recycled Plastic Waste

Project recycled plastic waste is the amount of plastic waste that is recycled by the project activity. As per the applied methodology, Project recycled plastic waste is calculated as follows:

$$P_{recycled,y} = \sum_{i=1}^{n} P_{p,recycled,i,y} \times AF_i + \sum_{i=1}^{n} P_{dp,recycled,i,y} \times MF$$

Where:

$Precycled$, = Total amount of plastic waste recycled by the project activity in year y (tonnes)

Pp, = Amount of plastic waste of material type i recycled by the project activity in year y (tonnes) without depolymerization

AFi = Adjustment factor for composite material i for non-composite materials, this factor is equal to 1.

$Pdp,,,$ = Amount of plastic waste in the form of depolymerized plastics of material type i recycled by the project activity in year y (tonnes). Since the material type can no longer be determined based on the output, it must be determined based on the input to the depolymerization process, using a mass balance approach.

MF = Mass fraction of the output of the depolymerization process used for plastic production

Estimated recycled plastic waste for HDPE:

Year	Estimated baseline recycled plastic waste (tonnes)	Estimated project recycled plastic waste (tonnes)	Estimated net recycled plastic waste (tonnes)
2020-21	0	2500	2500
2021-22	0	2500	2500

2022-23	0	3500	3500
2023-24	0	8000	8000
2024-25	0	8000	8000
2025-26	0	11000	11000
2026-27	0	11000	11000
Total	**0**	**46500**	**46500**

Estimated recycled plastic waste for PP:

Year	Estimated baseline recycled plastic waste (tonnes)	Estimated project recycled plastic waste (tonnes)	Estimated net recycled plastic waste (tonnes)
2020-21	0	1000	1000
2021-22	0	1000	1000
2022-23	0	1500	1500
2023-24	0	2000	2000
2024-25	0	2000	2000
2025-26	0	4000	4000
2026-27	0	4000	4000
Total	0	15500	15500

2.4.8 Methodology Deviations

After reviewing the documents and making observations during onsite visit VVB found that the project has no methodology deviations.

2.4.9 Data and Parameters Available at Validation

To ensure compliance with the formats of PWRM0002 Plastic Waste Mechanical Recycling Methodology /B03/, the data and parameters were verified throughout the project validation (version 1.1). All data and parameters are shown within the Project Description and Monitoring Report of "Incentivising recycling in India through the generation of plastic credits".

Sr. No.	Parameter	Unit	Value	Assessment
1	Brecycled,i,y	tonnes/year	0	Baseline plastic waste recycling is zero for new project activities
2	Bp,recycled,i,y	tonnes/year	0	Baseline plastic waste recycling is zero for new project activities

VVB has assessed that the parameter and data (values) used to estimate plastic waste reduction under the project and as mentioned in Section 4.1 of the Plastic Standard VCS JPD&MR (v1.6) /01/ and found that the parameter and data used are appropriate and meet the requirements of the methodology PWRM 0002v1.1. /B03/

2.4.10 Data and Parameters Monitored

The data and parameters provided by PP in the monitoring report were checked corresponding with the format of PWRM0002 Plastic Waste Mechanical Recycling Methodology (version 1.0) /B03/. All data and parameters are shown within the Project Description and Monitoring Report of "Incentivising recycling in India through the generation of plastic credits".

Sr. No.	Parameter	Unit	Value	Assessment
1	Sorting output	Tonnes /year	HPDE - 3,801 PP – 0	During the on-site visit, through the observation of the process, VVB confirms that the sorting output is being monitored by employing weighing scales.
2	Recycling input	-	Rigid Plastics Caustic soda Surfactants Degreasers	During the on-site visit, through the observation of the process and interviews of stakeholders, VVB has verified that plastic waste and other materials are indeed utilized as part of the recycling process.
3	P,recycled,i,y	Tonnes /year	HDPE: 3,712 PP: 0	During the on-site visit, through the observation of the process and the interviews of stakeholders, VVB verified that each material type i is measured with weighing scales after recycling process and before dispatch to the customers.
4	Pp,recycling,i,y	Tonnes /year	HDPE: 3,712 PP: 0	The quantity of recycled plastic waste, which can be used to replace the virgin plastic in the manufacture of recycled products, is being recorded by weighing the final recycled rigids plastic granules at Banyan nation. This is verified by VVB during on-site visit through the observation of the process and interviews of stakeholders.
5	End destination of non-recycled plastic waste	-	Plastic waste that enters the project recycling facility but is not recycled or is	The plastic waste that enters to the facility but is not being recycled at facility, is being sent to other parties

	End destination of non-plastic waste from recycling facility		lost during the recycling process will be sold to other plastic recyclers who make various products – about 10% of plastics that are rejected. Hazardous waste and effluent sent to third parties for treatment and disposal.	involved in manufacturing other products from non-recycled plastics. This is verified by VVB during the on-site visit and through the examination of agreements with Ultratech Cement /15/ Furthermore, hazardous waste is also sent /15/ to other parties for environmentally sound disposal. The validity of this practice is confirmed through the contract between the Banian nation and Ramky.
6	AFi	-	1 (for non-composite materials)	VVB assessed that the PP has chosen the following: a) Apply the default factors listed in Table 2 that correspond to the composite materials recycled or b) Use sampling to determine the fraction of plastic in the composite material following the most recent version of the CDM's Standard: Sampling and surveys for CDM project activities and programmes of activities (see Adjustment factor under Section 8.1 of this methodology) for the determination of AFI which is required to baseline and project recycled plastic waste.

2.4.11 Monitoring Plan

The project proponent had implemented well establish quality management procedures /20/ for the effective management of the data and information. Written standard operating procedures (SOPs) /20/, have been developed by PP and is in place for each measurement task, specifying responsibilities, timing, and record-keeping requirements.

All the parameters outlined in Joint PD and MR Section 5.2 for throughout the monitoring period was cross verified during onsite visit and VVB found that PP had meticulously tracked and recorded /18/ all the parameters. It was also observed that, to measure the quantity of each material type recycled under the project before dispatching to the next stage and prior to any manufacturing within the recycling facility, calibrated weighing scales /17/ is being used.

The interviews conducted with stakeholders, during site visit, confirmed that the project proponent had designated procedures for recording, compiling, and analysing the data, parameters, and other pertinent information to quantify and report the collected and recycled plastic waste in the project scenarios. During on-site visit through the interviews of stakeholders, it was confirmed that adequate training is being provided to plant personnel to ensure proper monitoring of the mentioned parameters.

During on-site visit, the Management Representative of PP demonstrated that how as per the requirements of Plastic Waste Reduction Standard v1.0 /B01/ all monitoring data are being electronically archived and ensured that data will be securely stored for a minimum of two years after the project's crediting period concludes.
PP had well documented Quality Assurance and Quality Control (QA/QC) procedures is in place, including training and cross-checking of input data, had been applied to enhance confidence in the accuracy of all measurements and calculations which was verified by VVB during site visit.

The monitoring plan was checked by VVB, using the following methods:

- Traceability check to cross reference volumes recycled.
- Check of documentation and ledger to see whether all parameters were included.
- site visit to check procedures and information flow.

Monitoring plan complies with all points described in the methodology.

3 VERIFICATION FINDINGS

3.1 Implementation Status of the Project Activity

"Incentivising recycling in India through the generation of plastic credits" started on 05th February 2020 in India. Recycling facility is in Hyderabad, Telangana, India where Plastic Waste is being recycled as stated in section 1.10 of Joint PD and MR v1.6 /01/. Actual quantity of recycling is much lower, than initially expected mentioned in the estimates based on the calculation, because the recycling facility was shut down /32/ between 23/03/2020 to 05/05/2020 due to COVID-19.

3.1.1 Description of Next Stage (Optional)

The PP has provided a description of the next stage after the recycling of the waste plastic to plastic pallets. As per these recycled plastic pallets are being sold to the manufacturers for making mainstream products and packaging material from recycled plastic waste replacing virgin plastic. The same had been confirmed by VVB by verifying the tax invoice for sale of the plastic pallets.

3.2 Quantification of Collected and/or Recycled Plastic Waste

3.2.1 Accuracy of Calculations

A traceability analysis was performed to determine the accuracy of the calculations /02/. As the part of this analysis, the quantity of recycled plastics was cross checked by comparing the quantities mentioned in the Joint PD & MR v1.6 /01/ and Plastic Crediting Calculation spreadsheet /02/ provided by the PP. Apart from the same was also analyse during the on-site visit through interviews of the staff involved in the recycling of plastic waste by the VVB, and comparing the data provided by the PP with the records available at Banyan Nation facility.

Hence, based on the above findings VVB conforms that the data is reliable.

As demonstrated in section 4 (Estimated recycled plastic waste) of the Joint PD and MR v1.6 /01/, the amount of waste recycled is significantly less than expected. The primary cause of this was the covid epidemic due to which the recycling facility was shut down /32/ between 23/03/2020 to 05/05/2020.

3.2.2 Quality of Evidence to Determine Collected and/or Recycled Plastic Waste

In order to ensure the quantity of plastic waste being recycled in the facility, the quantity of plastic waste is being measured at different stages. The plastic waste is being weighed using calibrated weighing balance /17/ at the following stages,

i. after receiving the collected waste

ii. after segregation of different types of plastic waste

iii. after bailing the different types of plastic waste in different bags

iv. before recycling

v. after recycling

During the on-site visit it was observed that Banyan Nation staffs is handling data carefully at every stage, and this was also cross checked with the logbooks shared by PP where they maintain all the data /18/ and the sale invoice for the collection /12/.

Hence, based on the observations made during on-site visit and review of documents, VVB conforms that the waste recycled is found to be reliable.

4 VALIDATION AND VERIFICATION CONCLUSION

Carbon Check (India) Private Limited (CCIPL) has conducted the joint validation and verification of the project activities "Incentivising recycling in India through the generation of plastic credits". Validation was conducted for the crediting period from 05/02/2020 to 04/02/2030 whereas the verification covers credits for the period of 05/02/2020 to 04/02/2022. In line with the paragraph 4.1.2 (1) of Plastic waste reduction standard (version 1.0) the reasonable level of assurance is applied considering the service is joint validation and first verification.

The review of the project documents, including the project description and monitoring report /01/ and additional documentation (see Appendix 1) combined with the interviews that had been conducted with stakeholders, has provided enough evidence to the Validation and verification team to determine that the stated criteria are met.

During the audit all the Corrective Action Requests (CARs) or Clarification Requests (CL) were raised and successfully closed.

Carbon Check (India) Private Limited (CCIPL) has verified and hereby certifies that the project activity "Incentivising recycling in India through the generation of plastic credits":

a) Has correctly described the Project Activity in the Joint PD and MR /01/ including the applicability of the approved methodology PWRM0002- Plastic waste recycling methodology, version 1.1 /B03/ and meets the methodology applicability conditions, is additional and complies with the monitoring methodology, has appropriately conducted local consultation process.

b) The project complies with the criteria outlined in the Plastic Waste Reduction Standard v1.0 /B01/

c) Supporting documents provided are complete and verifiable.

d) The project is not likely to cause any net-harm to the environment and/or society and complies with the environmental and Social Safeguards Standard,

e) The equipment used to measure the collected or recycled plastic waste are reliable and calibrated in accordance with manufacturing guidelines.

f) The estimated waste recycled is accurately calculated.

Verified recycled plastic waste in the verification period:

Total recycling activity of both HDPE & PP:

Year	Baseline recycled plastic waste (tonnes)	Project recycled plastic waste (tonnes)	Net recycled plastic waste (tonnes)
05/02/2020-31/12/2020	0	810	810

01/01/2021-31/12/2021	0	2588	2588
01/01/2022-04/02/2022	0	314	314
Total	0	3712	3712

Total recycling activity of HDPE:

Year	Baseline recycled plastic waste (tonnes)	Project recycled plastic waste (tonnes)	Net recycled plastic waste (tonnes)
05/02/2020-31/12/2020	0	810	810
01/01/2021-31/12/2021	0	2588	2588
01/01/2022-04/02/2022	0	314	314
Total	0	3712	3712

Total recycling activity of PP:

Year	Baseline recycled plastic waste (tonnes)	Project recycled plastic waste (tonnes)	Net recycled plastic waste (tonnes)
05/02/2020-31/12/2020	0	0	0
01/01/2021-31/12/2021	0	0	0
01/01/2022-04/02/2022	0	0	0
Total	0	0	0

5 APPENDIX 1: REFERENCE DOCUMENTS

S. No.	Document
/01/	Joint Project Document and Monitoring Report v2.0 Dated: 25/10/2023 Joint Project Document and Monitoring Report v1.5 Dated: 26/06/2023 Joint Project Document and Monitoring Report v1.4 Dated: 27/05/2023 Joint Project Document and Monitoring Report v1.3 Dated: 13/11/203
/02/	Plastic Crediting Calculation spreadsheet (ex-ante and expost)
/03/	Banyan Nation registration license TSPCB approval no – TSPCB/ZO/RCP/PASHA/249/CFO/2020 – 178 Factories license no – 95997 GST – 36AAFCB5861L2ZA
/04/	Employment contracts/records of the recycling facility staff and contract.
/05/	Commissioning certificates of machinery installed in the recycling plant.
/06/	Banyan nation's contract with, i. Informal Waste Workers ii. Transport agency iii. Third Party Buyer
/07/	KML files for project locations of 1st PAI
/08/	Incentivising recycling in India through the generation of plastic credits Registry https://registry.verra.org/app/projectDetail/PWRP/3597
/09/	Banyan Nation development ownership confirmation over the Plastic waste project
/10/	Spreadsheet of Quantification of collected and recycled plastic waste for baseline as well as project activity.
/11/	Local Stakeholder Consultation Report: • Proof of invitation to local stakeholders • Advertisement • Stakeholder feedback report
/12/	Sale invoices of the recycled plastic granules and scrap
/13/	Compliance documents w.r.t the applicable local laws: 1. Plastic waste registration certificate from CPCB 2. Consent to operate from State pollution control board, 3. Form IV annual plastic waste returns submission SPCB and 4. Declaration for the EPR credits issued.
/14/	Records of the Health insurance provided for the recycling facility employees.
/15/	Wastewater, Hazardous waste disposal agreements with the pollution board approved parties: 1. Ramky Enviro Engineers – To treat Hazardous waste 2. GGEPIL – To treat Hazardous waste & Non-Hazardous waste and 3. PETL – To treat Wastewater effluents

/16/	Recycling machinery purchased invoices
/17/	Calibration certificates of the In-house weighing bridge facility
/18/	Logbook of the buying, selling and delivery notes / Monitoring sheets
/19/	Test report of recycled plastic product quality check by NABL accredited laboratory
/20/	SOP's and Training records: • Production manuals • Use of PPE Kits • Collection and segregation of waste • Training records
/21/	Banyan Nation Policy on: • Child labour • Compliance with relevant laws • Safe working condition • Discrimination • Sexual harassment • Labour law and work condition • Environment Health & Safety • Grievances • Compliance, Appeal, and disputes • Policy on bonus (for over time duty and not deducting salary of the workers as part of penalty or action)
/22/	Details of the EPR credit issued to the 3rd parties under EPR scheme of PWM rules 2016.
/23/	Energy consumption records for the recycling facility
/24/	Organizational structure, responsibilities, and competencies of the personnel that carrying out monitoring activities
/25/	Fuel consumption records for transportation of recycled products
/26/	Monitoring reports demonstrating positive impact of projects on natural resources. • Air Quality • Water Quality • Soil Quality • Biodiversity • Threatened and endangered species
/27/	Plant Commissioning certificate for capacity enhancement of recycling to substantiate the fulfilment of applicability criteria of applied methodology: • PWRM0002- Plastic waste recycling methodology (version 1.1)
/28/	Recycling facility approvals from the Government authorities to substantiate the fulfilment of eligibility criteria for inclusion of project activity
/29/	Logbooks, invoice values etc., used for following monitoring parameters: • Sorting output • Recycling input • $P_{recycled,i,y}$ • $P_{p,recycled,i,y}$ • End destination of non-recycled plastic waste and End destination of non-plastic waste from recycling facility • Afi

/30/	Details of the comments received during the public commenting period
/31/	Declaration for the Site shutdown due to the COVID-19
/32/	Contract between VNV and Banyan Nation
/33/	Collection of plastic waste
/34/	Investment Analysis sheet
/35/	Zoom call recording

APPENDIX 2: BACKGROUND DOCUMENTS

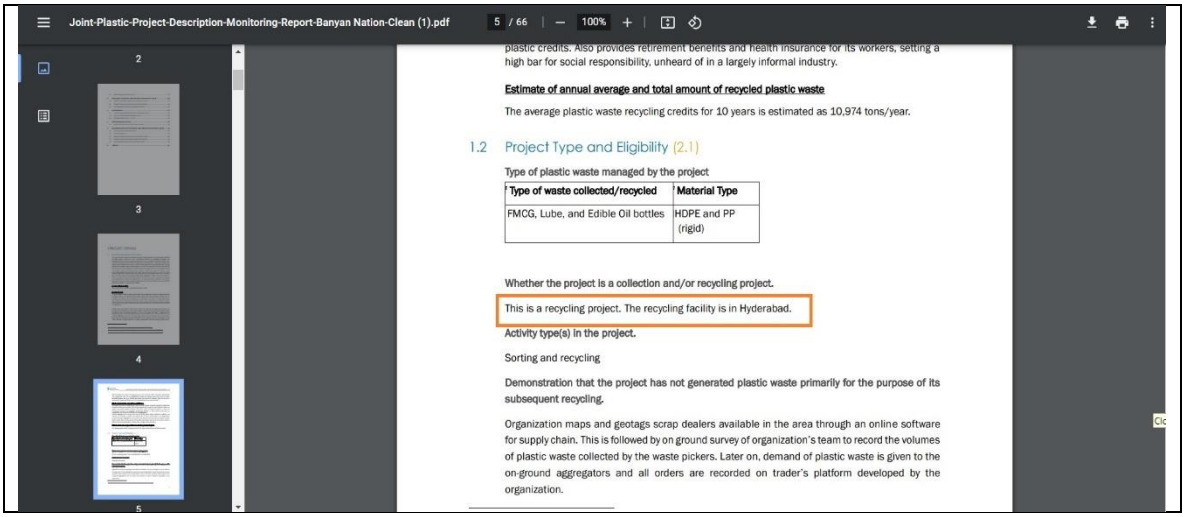
Ref	Documents
/B01/	Plastic Waste Reduction Standard v1.0
/B02/	Plastic Program Guide v1.0
/B03/	PWRM0002 Plastic Waste Mechanical Recycling Methodology v1.0
/B04/	VCS Validation and Verification Manual v3.2
/B05/	Plastic Waste Management rules 2016
/B06/	Investing analysis am-tool-27-v11.0

APPENDIX 3: CLARIFICATION AND CORRECTIVE ACTION REQUESTS

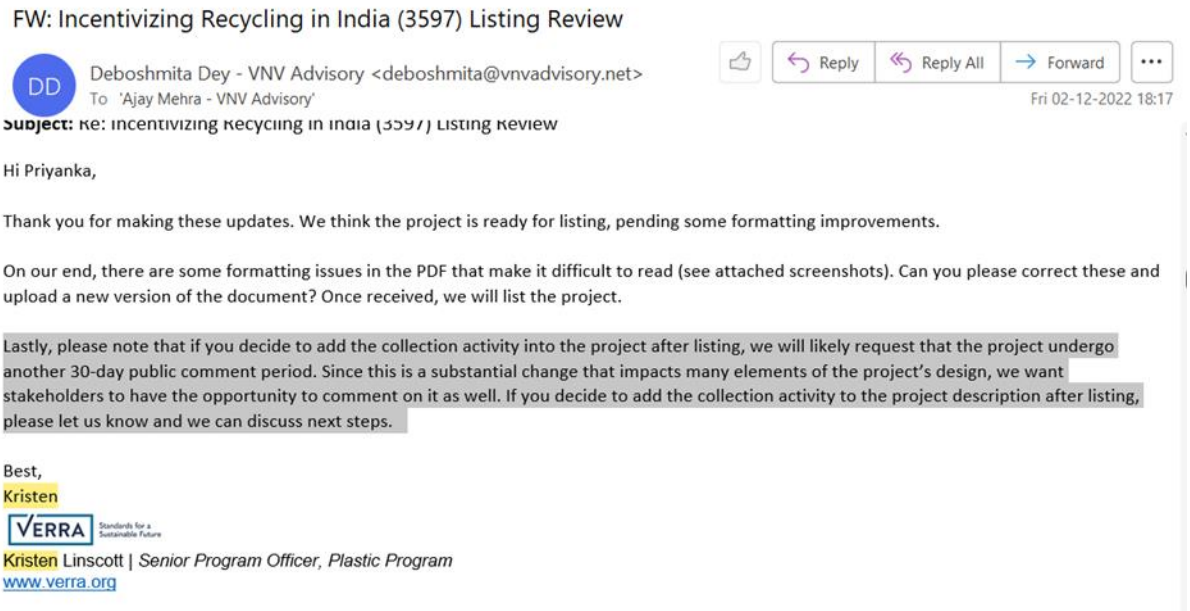
Table 1. CLs from this Joint validation and verification

CL	01	**Section no.**	Verra Registry	**Date:** 20/03/2023
Description of CL				
The VCS PD listed on the VERRA website is only aimed at the Recycling activity. However, the VCS PD submitted by the PP for joint validation and verification purposes includes collection activity as well apart from recycling. PP shall explain how the reason for this change and explain why the revised PD was not submitted to VERRA for re-listing as this a deviation from the project design that was approved by VERRA for the purpose of listing.				
Project participant response				**Date:** 27/03/2023
PP would like to clarify that the collection part has been now removed from the revised JPDMR.				
Documentation provided by project participant				
Revised JPD MR				
VVB assessment				**Date:** 05/06/2023
VVB has found that the collection part is removed from the revised JPD&MR (v1.4), but PP needs to clarify why the revised JPD was not submitted to VERRA for re-listing as verification team has checked, v 1.2 of JPD is available on the VERRA site. Hence, CL01 has not been closed.				
Project participant response				**Date:** 16/06/2023

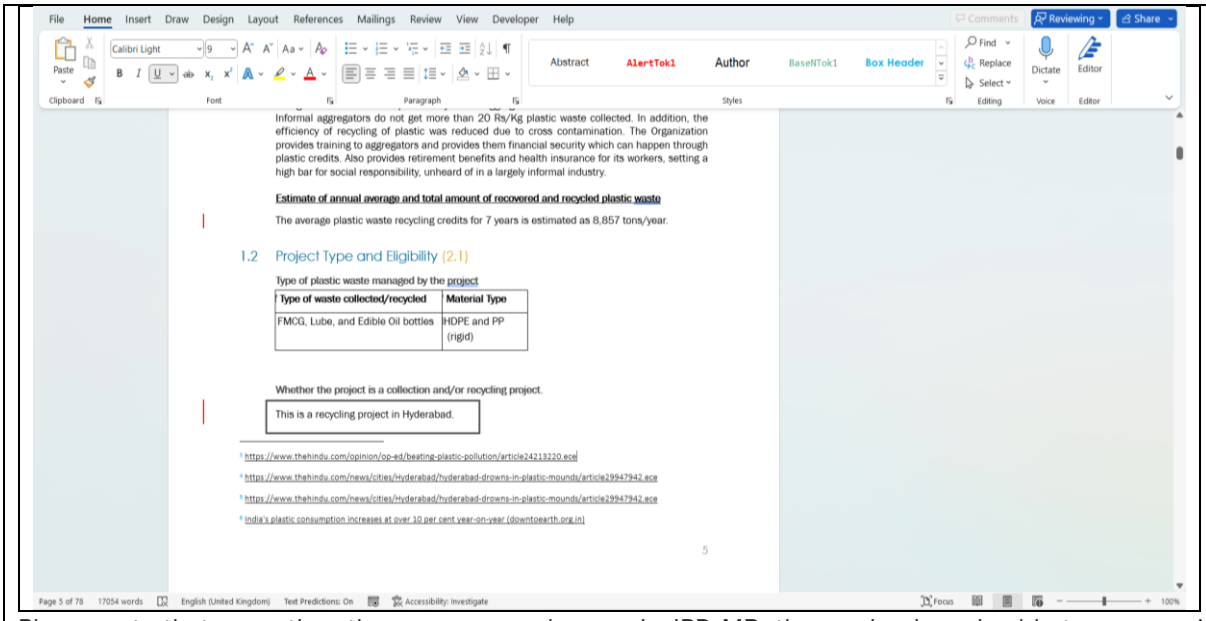
PP would like to clarify during the initial listing we tried to get the project listed in verra with both collection and recycling. However, after comments from verra PP decided to list the project with recycling only and then later try with VVB for adding collection by explaining on-site scenario. It was found out during VVB audit of the project that collection is not possible, hence PP has removed the collection part again.
Since the JPDMR is of version 1.4 right now. The listed one is version 1.2. but comprises of recycling only. See screenshot from listed JPDMR Page no-05, section 1.2-



Verra also guided us during initial listing that if we decide to add collection again then only, we must go through PCP for collection part again. Since it was listed with recycling part only. Below is the screenshot of the same.



For comparing: The current JPDMR i.e., Version 1.5. Page no. 05, section 1.2. (Subsequent version changes has been made as per responses of VVB queries and CARs raised)


Informal aggregators do not get more than 20 Rs/Kg plastic waste collected. In addition, the efficiency of recycling of plastic was reduced due to cross contamination. The Organization provides training to aggregators and provides them financial security which can happen through plastic credits. Also provides retirement benefits and health insurance for its workers, setting a high bar for social responsibility, unheard of in a largely informal industry.

Estimate of annual average and total amount of recovered and recycled plastic waste

The average plastic waste recycling credits for 7 years is estimated as 8,857 tons/year.

1.2 Project Type and Eligibility (2.1)

Type of plastic waste managed by the project

Type of waste collected/recycled	Material Type
FMCG, Lube, and Edible Oil bottles	HDPE and PP (rigid)

Whether the project is a collection and/or recycling project.

This is a recycling project in Hyderabad.

Please note that every time there are some changes in JPD MR, the version is revised but every version does not need to be relisted again. There is no such requirement stated in VERRA for the same.

Documentation provided by project participant	
Nil	
VVB assessment	**Date:** 07/07/2023
Based on the communication exchanged between the PP and Verra at the time of project listing, as well as between the PP and the VVB during the field audit, it has been determined that the plastic collection does not meet the standard requirements. As a result, the collection has been excluded from the JPD&MR v1.5 after thorough review by VVB. Hence the CL 01 has been closed.	

CL	02	**Section no.**	1.3	**Date:** 20/03/2023
Description of CL				
In the referred section of VCS JPD&MR (v1.3), it is stated that the project is a grouped project only for collection activity. However, during the OSV, the PP informed that it intends to develop both collection and recycling activity types as grouped project activity. PP shall clarify whether both the activity types (viz., collection or recycling) or only either of the activity types would be de developed as grouped project activity and revise the section accordingly.				
Project participant response				**Date:** 27/03/2023
PP would like to clarify that the collection part has been now removed and the recycling won't be a grouped project since there is no fixed plan on future installation of plants. As per grouped project requirements, we need to mention the planned locations and instances. Hence, the project is now a standalone recycling activity in Hyderabad, India.				
Documentation provided by project participant				
Revised JPD MR				
VVB assessment				**Date:** 05/06/2023

It has been observed by the VVB that, PP has revised the section 1.3 of JPD v1.4 and the project is only performing recycling activity in Hyderabad. Hence, VVB conforms that the project is only having recycling facility and is not a group project. Hence, CL 02 has been closed.

CL	03	Section no.	1.4	Date: 20/03/2023
Description of CL				
In the referred section of VCS JPD&MR (v1.3), it is stated that, "Banyan Nation & VNV is the parent company of all the project activity instances." PP shall explain what is meant by this statement and further demonstrate how Banyan Nation or VNV can be considered as parent company of all the project activity instances.				
Project participant response				**Date: 27/03/2023**
This sentence has been now removed since this is not a grouped project activity anymore.				
Documentation provided by project participant				
Revised JPD MR				
VVB assessment				**Date: 05/06/2023**
In the referred section, PP has removed the sentence from the revised JPD&MR v1.4. Hence, CL 03 has been closed.				

CL	04	Section no.	1.6	Date: 20/03/2023
Description of CL				
In the referred section of VCS JPD&MR (v1.3), it is stated that, "Banyan nation has ownership over the collection activity as well. The organization purchases plastic waste from informal collectors/ traders from different locations." However, during the OSV (through interview with representatives of PP and review of documents) it was observed that Banyan Nation doesn't have a formal (legally binding) contract with the waste pickers or scrap dealers for procurement of the waste and it also doesn't have any document to substantiate that these waste pickers or scrap dealers have waived off their right to plastic credits. Hence, how Banyan nation has ownership over the collection activity and resulting waste collection credits shall be clarified in accordance with requirements for ownership as stipulated under section 3.4 of the Plastic Waste reduction Standard (v4.4).				
Project participant response				**Date: 27/03/2023**
PP would like to clarify that the collection part has been now removed from the revised JPDMR.				
Documentation provided by project participant				
Revised JPD MR				
VVB assessment				**Date: 05/06/2023**

VVB has found that in the referred section of JPD v1.4, PP has removed the collection part. However, PP is requested to provide plastic wavier form signed by the waste pickers or scrap dealers and recycled plastic buyers, to claim the ownership of the activity and avoid double counting. Hence, CL 04 has not been closed.
Project participant response **Date: 16/06/2023**
PP would like to clarify that the collection part has been now removed, hence, there is no requirement to get a plastic waiver signed by the scrap dealers and waste pickers. Further, to prove that the banyan nation receives plastic waste from scrap dealers, the sample declaration agreements have been already provided initially to the VVB (Folder name: 4. Agreements with suppliers). Additionally, there is no contract with the buyers of recycled granules. The buyers who are interested in purchasing the granules share an invoice with Banyan Nation, specifying the amount. Please note that the buyers cannot claim ownership or plastic credits as Banyan Nation is the only entity responsible for converting the waste plastic into granules and the buyers are buying it to manufacture products using the granules. Hence, the buyers are manufacturers and not recyclers. Sample invoices for the sale of recycled plastic granules have already been provided to VVB. Please refer to the folder titled "Recycled plastic granules sales invoices" shared earlier. Also, to prove that the buyers are registered under CPCB, the CTO/CTE has been provided now based on the sample invoices provided with the buyers.
Documentation provided by project participant
FG (Granules) sales Consent
VVB assessment **Date: 07/07/2023**
Based on the decision taken by the PP, it has been confirmed that the plastic waste collection from scrap dealers and waste pickers is no longer necessary for the project credit waiver. Additionally, the response from the PP regarding the credit waiver from recycled plastic buyers indicates that there will be no contractual agreements between the buyers and Banyan Nation. Instead, buyers will submit a work order to Banyan Nation specifying the value and quantity required to be supplied, and the material will be supplied accordingly. It is important to note that these buyers are manufacturers rather than recyclers, and they are not eligible to claim credits. To ensure compliance with the end user of recycled material, the PP has provided the CTO/CTE of the buyers whose invoices have been shared. Upon reviewing the provided sample invoice, VVB has noticed that certain invoices lack clarity, with some information such as the buyer's name being cut off during scanning, making it difficult to read. PP is requested to provide the clear invoices. Hence the CL 04 has not been closed.
Project participant response **Date: 13/07/2023**
The clear invoices have been now provided under sales invoice folder to VVB.
Documentation provided by project participant
Sales invoice folder
VVB assessment **Date: 18/07/2023**
VVB has reviewed the provided clear invoices and confirms the CL 04 has been closed

CL	05	Section no.	1.8	Date: 20/03/2023
Description of CL				
In the referred section of VCS JPD&MR (v1.3), it is mentioned that the crediting period of the grouped project is from 05/02/2020 till 04/02/2030. However, during document review it has been observed that the consent and authorization to operate is valid till 31/01/2030. Hence, PP shall explain the basis on which the end date of the crediting period has been chosen as 04/02/2030?				
Project participant response				**Date:** 27/03/2023
Please note that the consent order will be renewed after 31/01/2030 and will be shared with the VVB during subsequent verifications. Further, the crediting period has been now revised to 7 years (renewable twice).				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4				
VVB assessment				**Date:** 05/06/2023
It has been observed by the VVB that, PP conforms that the consent and authorization to operate will be renewed and PP has also revised the crediting period from 10 years fixed to 7 years renewable twice. Hence, CL 05 has been closed, however FAR 01 has been raised so that renewed consent order can be checked during subsequent verification.				

CL	06	Section no.	2.1.5	Date: 20/03/2023
Description of CL				
The description provided in the referred section of VCS JPD&MR (v1.3), talks about grievance mechanism and mentions that a feedback form will be developed with key indicators keeping the anonymity of respondent in consideration, which will be filled by the field workers. PP shall explain how the measures as described are in line with the requirement of section 3.19 of the Plastic Waste Reduction Standard (v4.4), which requires that a plan for Continued Consultation and Adaptive Management shall be developed and described in the project description and implemented to continue communication and consultation between the project proponent and all stakeholder groups about the project and its impacts. Furthermore, as the project activity is already implemented and under operation, the Continued Consultation and Adaptive Management shall be provided to the VVB for assessment.				
Project participant response				**Date:** 27/03/2023
Banyan nation has a grievance redressal committee in place for monthly review meetings related to the received grievances and for continued communication and consultation. They have verbal feedback rounds with stakeholders. Refer to section 2.1.5 for further details.				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4, Complaint book scanned copy				
VVB assessment				**Date:** 05/06/2023

Verification team has found that, PP has revised the Section 2.1.5 and Continued Consultation and Adaptive Management is conducted by grievance redressal committee in place for monthly review meetings related to the received grievances. VVB has also reviewed has the sample of Complaint book scanned copy provided by PP. Furthermore, PP has mentioned about the feedback form has been developed for the workers. So, PP is also requested to share a feedback form with the VVB to cross check the information provided in the referred section of the JPD v1.4. Hence, CL 06 has not been closed.
Project participant response **Date:** 16/06/2023
Please note that sentence has been revised and it was a typo error. There is only complaint box mechanism for complaints and feedbacks from the plant workers.
Documentation provided by project participant
Revised JPD MR V1.5
VVB assessment **Date:** 07/07/2023
After the review of the revised JPD&MR v1.5, VVB understood that there is only a compliant box available for the workers and who ever want to make a compliant/feedback can utilize it. Hence, CL 06 has been closed.

CL	07	**Section no.**	4.3	**Date:** 21/03/2023
Description of CL				
In the referred section of VCS JPD&MR (v1.3) and Plastic Credit Sheet (Estimated plastic credits sheet.xlsx), PP has provided estimated values for amount of plastic waste that would be collected by the project activity over its entire crediting period. PP shall provide the source or basis for the assumption and the applied increment factor.				
Project participant response				**Date:** 27/03/2023
The collection part has been now removed.				
Documentation provided by project participant				
-				
VVB assessment				**Date:** 05/06/2023
During the review of the document, VVB found that the PP has removed the collection part from the project activity and revised the JPD and plastic credit sheet accordingly. So, there is no need to provide estimated values for amount of plastic waste that would be collected by the project activity over its entire crediting period. Hence, CL 07 has been closed.				

CL	08	**Section no.**	4.3	**Date:** 21/03/2023
Description of CL				

In the referred section of VCS JPD&MR (v1.3) and Plastic Credit Sheet (Estimated plastic credits sheet.xlsx), PP has provided estimated values for amount of plastic waste that would be recycled by the project activity over its entire crediting period. PP shall provide the source or basis for the assumption and the applied increment factor. Furthermore, PP shall also explain why real values (as the plant has been in operation) and projected values based on the expansion plan of the company have not been used for the purpose of estimation.
Project participant response **Date:** 27/03/2023
The estimated recycling credits from 2020-2023 have been assumed based on the current collection and recycling activities. The estimated recycling credits from 2023-2027 has been revised now and assumed based on the total capacity of the plant as per the Consent order of operation and as per the expanded capacity assumed which can be up to 15000 TPA as mentioned in section 1.10 of the joint PD & MR.
Documentation provided by project participant
Revised estimated plastic credit sheet, revised joint PD & MR Version 1.4
VVB assessment **Date:** 05/06/2023
During review of documents, VVB has found that the estimation of the recycled plastic waste is relevant. According to the current collection and recycling activities, estimated recycled waste in this monitoring period (2023-2027) has been assumed, for crediting period PP has assumed the value for the estimated recycled plastic waste was based on total capacity of the plastic recycling plant including the expanded capacity assumption and PP has also provided the revised estimated plastic credit sheet. Hence, CL 08 has been closed.

CL	09	**Section no.**	7.1	**Date:** 21/03/2023
Description of CL				
In the referred section of VCS JPD&MR (v1.3), PP shall provide the source and supporting evidence for the values used for the following parameters: 1. **Sorting output:** a. Value of Quantity of sorted plastic waste of each material type i shall be provided. b. The value stated for the parameter in section 7.1 of VCS JPD&MR (v1.3) is 4108 tonnes for rigid plastic whereas a value of 4105 tonnes is provided in the cell C8 and D8 of worksheet "Data" in the excel sheet (Monitoring plastic credit sheet - 05-02-2020 to 04-02-2022.xlsx). 2. **Recycling input:** SOP for the recycling process shall be provided to substantiate the input materials used during the recycling process. 3. $P_{collected,d,y}$: a. The value stated for the parameter in section 7.1 of VCS JPD&MR (v1.3) is 4108 tonnes for rigid plastic whereas a value of 4105 tonnes is provided in the cell C8 and D8 of worksheet "Data" in the excel sheet (Monitoring plastic credit sheet - 05-02-2020 to 04-02-2022.xlsx). 4. $P_{recycled,i,y}$: PP shall provide all sales receipt and monthly stock assessment reports and sample of manual logbooks to VVB to substantiate the value of 3,794 tonnes used for this parameter. 5. **End destination of non-recycled plastic waste:** a. Contractual agreements / sales receipt with other recyclers for lost or scrap plastics that can't be processed in the recycling plant. b. Documentary evidence to substantiate that hazardous waste and effluent is sent to third parties for treatment and disposal.			
Project participant response				**Date:** 27/03/2023

1. Sorting output:
    a. The value of sorted output has been now provided in revised JPD MR and ER sheet.
    b. The value of sorted output has been revised.
2. SoP has been now provided to VVB.
3. 4105 has been only mentioned in section 7.1.
4. Sample sale receipts/invoices of sell of plastics have been already provided to VVB. Further sample logbooks have been provided for each year of the monitoring period and few Monthly FG stock sheets have been provided as well. Please note there are high amount of invoices and logbooks in hard copies it is difficult to scan and share them all. VVB is requested to randomly provide the dates for which the invoices/logbooks are required for cross-checking.
5. End-destination of non-recycled plastic waste:
    a. Contractual agreements have been now provided under "hazardous waste" folder. Also, sample invoices with other recyclers for lost or scrap plastics that can't be processed has been provided under "Rejected plastic waste invoices- 10%" folder.
    b. Sample manifests have been now provided under "effluent and hazardous waste manifest" folder.

Documentation provided by project participant

Supportives

VVB assessment	**Date:** 05/06/2023

1. **Sorting output:**
    a. Value of Quantity of sorted plastic waste of each material type shall be provided. PP has only provided the sorting output of rigid plastics. PP needs to provide the sorting output of the types of plastic waste sorted.
    b. The quantity of sorted output mentioned in the JPD&MR and monitoring sheet is revised.
2. PP has provided the SOP for the recycling process.
3. PP has now revised the RIGID plastic quantity.
4. PP must provide the sample records of the invoices/logbooks for the below mentioned dates.

- 01.06.2020 to 03.06.2020
- 15.03.2021 to 19.03.2021
- 06.02.2022 to 09.02.2022

5. End destination of non-recycled plastic waste:
    a. PP has provided the contractual agreements with the Ramky, GGEPIL and PETL.
    b. PP has provided Sample manifests substantiate that hazardous waste and effluent is sent to third parties for treatment and disposal.

Hence, CL 09 has not been closed.

Project participant response	**Date:** 16/06/2023

1. b. PP would like to clarify that banyan nation only have input of HDPE and PP which is both a type of rigid plastic, as can be verified from JPDMR section 1.2. table.

4. PP has provided the invoices and logbooks for 15.03.2021 to 19.03.2021, also PP would like to provide update that during the period-

- 01.06.2020 to 03.06.2020- No Production was there during this period.
- 06.02.2022 to 09.02.2022- It is not part of the monitoring period.

Documentation provided by project participant

Please refer folder "Sales data" and "production logbook"

VVB assessment	**Date:** 07/07/2023

Regarding 1a, the PP has clarified that the input of sorted plastic waste consists of HDPE and PP, which falls under the RIGIDs category. Therefore, it is considered as a combined category and has been duly mentioned in the JPD&MR.

For point 4, the PP has conducted a review of the provided sales data and logbooks for the period between 16/03/2020 and 19/03/2020.

However, to complete the assessment, the PP is required to furnish sample invoices and logbooks for the following dates: 19/01/2022 to 20/01/2022.

Hence, the CL 09 has not been closed

Project participant response	**Date:** 13/07/2023
PP has provided the logbook for 15/03/2020 – 19/03/2020. Please note that there has been no production on 15th, 16th and 17th. Hence, logbooks of 18th and 19th have been provided. Also, sample sale invoices of 19th Jan and 20th Jan 2022 has been provided.	
Documentation provided by project participant	
Sales invoice folder, EREMA logbook folder.	
VVB assessment	**Date:** 18/07/2023
VVB has reviewed the provided logbooks and sale invoices and confirms the CL 09 has been closed.	

CL	10	**Section no.**	7.2	**Date:** 21/03/2023
Description of CL				
As per the applied methodology PWRM0001 (v1.1), parameter Pcollected,d,y is defined as “amount of plastic waste collected by the project activity and transferred to destination d in year y” whereas applied methodology PWRM0002 (v1.1) defines Sorting Output as “Quantity of sorted plastic waste of each material type i”. Moreover, in the referred section of VCS JPD&MR (v1.3), under parameter “End destination of non-recycled plastic waste” it is stated, “Plastic waste that enters the project recycling facility but is not recycled or is lost during the recycling process is sold to other plastic recyclers who make various products – about 10% of plastics that is rejected.” However, a value of 4108 tonnes is provided for both parameter Pcollected,d,y and “Sorting Output”. PP shall explain how the same value has been used for both the parameters when both the parameters are defined differently, and process of sorting takes place after the waste is collected and brought to the recycling facility.				
Project participant response				**Date:** 27/03/2023
The value of sorted output has been now provided in revised JPD MR and ER sheet.				
Documentation provided by project participant				
Revised JPD MR				
VVB assessment				**Date:** 05/06/2023

Verification team after reviewing the revised document, conforms that the Collection part has been removed from the JPD. However, PP is requested to mention the specific value of the parameter “End destination of non-recycled plastic waste”. Hence, CL 10 has not been closed.
Project participant response **Date:** 16/06/2023
The value has now been updated in the relevant section in the revised JPDMR, same can be verified from the excel sheet ’Scrap Sales Register_05.02.2020 - 04.02.2022’
Documentation provided by project participant 1. Revised JPDMR 2. Scrap Sales Register_05.02.2020 - 04.02.2022
VVB assessment **Date:** 07/07/2023
After reviewing the revised JPD&MR v1.5 and the Scrap Sale Register, VVB has verified that the parameter "End destination of non-recycled plastic waste" is indicated as 765.255 tons. Hence, the CL 10 has been closed

CL	11	Section no.	Documents	Date: 24/03/2023
Description of CL				
PP is requested to provide following documentary evidence: 1. Training records pertaining to: a. Health and safety training b. Use of PPE kit c. Hazardous waste handling d. Collection methods/ technologies e. Training to collectors on safe areas f. Training on waste sorting 2. Health insurance 3. Employment contract/ record (for minimum wages and equal remuneration) 4. Banyan Nation’s contract with, a. Waste collectors / aggregators b. Transport agency c. Buyers of recycled granules d. Buyers of scrap or waste plastics e. Contract with organization responsible for handling and disposal of hazardous waste (sludge) 5. Manufacturer’s specifications of equipment installed at recycling facility (make, model, capacity, rate power consumption, accuracy class) 6. Purchase order of equipment 7. Commissioning certificate for EREMA extruder 8. Banyan Nation’s policy on: a. Child labour b. Anti-discrimination c. Health and safety d. Forced labour. e. Sexual harassment f. Employment (equal opportunity and remuneration) g. Safe working conditions 9. Fuel consumptions records for transportation of collected and recycled product 10. Records of average round trip distance for transportation of plastic collection and recycled product 11. Environmental Impact Assessment Report 12. Documentary evidence demonstrating positive impact of project on natural resources:				

a. Air Resource
b. Water Resource
c. Soil quality
d. Biodiversity
e. Threatened and endangered species

13. Collection Activity: Invoices for purchased plastic waste covering the entire monitoring period (from 05/02/2020 to 04/02/2022)
14. Recycling Activity:
    a. Invoices for sale of plastic granules to end-users covering the entire monitoring period (from 05/02/2020 to 04/02/2022)
    b. Monthly stock-change assessment report covering the entire monitoring period (from 05/02/2020 to 04/02/2022)
15. Invoice of sale of scrap or unused plastic waste to other recyclers covering the entire monitoring period (from 05/02/2020 to 04/02/2022)
16. Calibration certificates for monitoring/measurement equipment covering the entire monitoring period (from 05/02/2020 to 04/02/2022)
    a. Weighbridge
    b. Weighing scales
    c. Electricity meters
    d. Internal lab instruments
17. Local Stakeholder Consultation:
    a. List of invitees
    b. Invitation letter / advertisement
18. Copy of grievance register and records to grievance committee meetings.
19. Records of sale of EPR credits during the entire monitoring period (from 05/02/2020 to 04/02/2022)

Project participant response	**Date:** 27/03/2023

1. PP has provided sample training attendance sheets covering each of the topics.
2. PP has provided the sample health insurance copies of the workers.
3. PP has provided sample employment contract and pay slips of the workers.
4. A. The collection activity has now been removed hence the contract with waste collectors/aggregators has not been provided.

B. Agreement with transport agency has been provided.

C. There is no contract with buyers of recycled granules. The buyers who are interested to buy the granules share an invoice with banyan nation with specified amount. Sample recycled granules plastic sale invoices have been provided.

D. Banyan nation contract with organizations responsible for handling scrap, waste plastic and hazardous waste has been provided under the “hazardous waste” folder.

E. Banyan nation contract with organizations responsible for handling hazardous waste has been provided under the “hazardous waste” folder.

5. Manufacture specifications of equipment’s has been now provided.
6. Purchase order of equipment has been provided.
7. Commissioning certificate of EREMA has been provided.
8. PP would like to clarify that the banyan nation policies has been clubbed within the certified standing orders for the employees working within the organization. The same has been provided.
9. Transport bills have been provided under fuel consumption records folder.
10. Transport bills have been provided under fuel consumption records folder.
11. PP would like to clarify that there is no EIA report available with Banyan nation. However, environmental monitoring records have been provided under quality records folder.
12. Sample quality records have been provided.
13. This is no more applicable since collection activity has been removed.
14. Sample invoices with buyers of granules has been already provided to VVB, FG stock sheets have been provided to VVB.

15. Sample invoices with other recyclers for lost or scrap plastics that can't be processed has been provided under "Rejected plastic waste invoices- 10%" folder.
16. Calibration certificates have been provided. Please note that the weighbridge was installed in year 2022, before that weighing scales were used. Further, for electricity meters, the government official cross checks and takes notes on the meters for which the register scanned copy has been provided.
17. The attendance sheet of the LSC has been provided. Further, the copy of invitation mail has been provided, please note that the waste pickers and other plant personnel were invited through word of mouth.
18. The scanned copy of complaint book has been provided.
19. PP would like to clarify that there has been no sale of EPR credits during the current MP.

Documentation provided by project participant

Stated above

VVB assessment	**Date:** 05/06/2023

During the review, VVB found that,

1. PP has provided sample training attendance sheets covering each of the topics.
2. PP has provided the sample health insurance copies of the workers.
3. PP has provided sample employment contract and pay slips of the workers.
4. Contract with,
   a. Contracts has not been provided because the collection part is removed.
   b. Agreement with transport agency has been provided of 2021. PP is requested to provide agreement of 2020 to 2022 covering the entire crediting period.
   c. PP has provided the invoices raised for the sale of plastic granules to the end user recyclers instead of agreements.
   d. Contract with the Buyers of scrap or waste plastics has been provided.
   e. Contract with organization responsible for handling and disposal of hazardous waste (sludge) has been provided.
5. Manufacture specifications of equipment's has been provided.
6. Purchase order of equipment has been provided.
7. PP has provided the commissioning report which has a date of 19.10.2019.
8. Banyan Nation Policies have been provided by the PP.
9. Transport bills has been provided for fuel consumptions records for transportation of collected and recycled product.
10. Transportation bill has been provided for average round trip distance for transportation of plastic collection and recycled product.
11. PP has provided the Air, Water and Noise monitoring report as they have not conducted any EIA assessment.
12. PP has provided the quality assessment reports of Air & Water only. PP must provide the other parameters like Soil, Biodiversity and Threatened & endangered species reports.
13. Since collection facility has been removed. So, this is not applicable.
14. PP has provided the sale invoices of the plastic granules and FG stock records.
15. Sample of Invoice of sale of scrap or unused plastic waste has been provided.
16. Calibration certificates of the main 60 tons weighbridge, weighing scales were provided. Also, for the energy meters PP has provided the cross-check register notes mentioned by the electricity board.
17. The attendance sheet of the LSC has been provided but there is a lack of required information as mentioned below:
    - Topic of the meeting
    - Date
    - Duration of the meeting
    - It is observed that designation of the attended stakeholders is same and it is mentioned as proprietor.

    Further, the copy of invitation mail has been provided.
18. The copy of the Scanned complaint book is provided.

19. VVB needs documentary evidence to prove that there has been no sale of EPR credits during the current MP.

Hence, CL 11 has not been closed.

Project participant response	Date: 16/06/2023

4. b. PP would like to explain that we have qualified 5-6 transport agencies and we go with whichever gives a good deal for load, no such agreement is in place. Also, it is part of collection hence not mandatory to share the agreements.
12. PP would like to clarify that banyan nation's operation comprises of mechanical recycling only hence the operations from start to finish are in no way harming or have potential to harm Soil, Biodiversity and threatening & endangering of species and there is no requirement of monitoring the same.
17. Correct attendance sheet has been provided. Please refer "LSC Meet Attendance sheet". Also, PP would like to clarify that the stakeholders are the proprietors for banyan nation hence, the designation. They are small scale scrap dealers and waste pickers, so no particular designation can be provided.
19. Form IV details for the monitoring period has been provided since no EPR credits have been sold during the audited monitoring period. Please refer "form IV' folder.

Documentation provided by project participant

1. LSC Meet Attendance Sheet
2. Form IV folder.

VVB assessment	Date: 07/07/2023

After assessing the provided responses VVB confirms that
4. b, PP has shortlisted and qualified 5-6 transport agencies and will choose the one with the most competitive pricing for transporting the loads. According to the PP, the transportation of incoming materials is now considered part of the collection process, and since collection has been removed from the project, it is no longer mandatory to provide agreements for transportation of incoming material.
12. Considering the response as the process of the operations are mechanical recycling there is no significance harm to soil, biodiversity and threatening & endangering of species.
17. The PP has rectified the attendance sheet by including the title and date in the previously provided "LSC meet attendance sheet." Upon reviewing the attendance sheet, VVB noticed a discrepancy in Hussain's designation. While the JPD&MR states that Hussain is an informal waste picker, the attendance sheet lists him as a proprietor. PP needs to provide clarification regarding the difference in role details between JPD&MR v1.5 and the attendance sheet.
19. Upon reviewing the provided FORM IV, VVB has identified the following observations.

- The provided copies of Form IV for 2020-2021 & 2021-2022 reveals that the shared copies are filed versions. To ensure compliance with the Plastic Waste Management Rules 2016 and subsequent amendments, PP is requested to furnish the submitted copy of Form IV. This copy should be signed and stamped by the SPCB authority, confirming the timely submission of Form IV within the prescribed timeline. Also, including the annexures mentioned in the submission along with the Form IV copy.
- Based on the PP's confirmation in their response, it is stated that no EPR credits were allocated during the monitoring period. Furthermore, it is necessary for the PP to submit a declaration on Banyan Nation's letterhead stating that no EPR credits were issued by Banyan Nation for the specified monitoring period.

Hence, the CL 11 has not been closed.

Project participant response	Date: 12/07/2023
17. The designation has been now made consistent with the attendance sheet in the Joint PDMR. 19. 1. The cover letter has been now provided with FORM IV. 2. PP would like to clarify that some amount of plastic recycled from the month of Jan 2022 and Feb 2022 were sold as EPR credits in March- April 2022. The declaration along with the invoice and other proofs have been now provided. The Plastic credits from Jan 2022 and Feb 2022 has been now deducted accordingly and revised in the plastic credit sheet and JPD MR.	
Documentation provided by project participant	
Revised JPDMR, Revised monitoring plastic credit sheet, EPR folder, form IV folder	
VVB assessment	**Date:** 18/07/2023
VVB has assessed the provided responses and documents and noted that, 17. The designation of the Hussain is now updated in the JPD&MR v1.6 19. 1. PP has submitted the FORM IV covering letter along with the pollution control board acknowledgement to the regional office for the financial year 2020-2021 & 2021-2022. However, it has been noticed that PP has not provide the submission made to the appropriate state pollution control board as mandated by the regulations. 2. PP has mentioned the few of the quantities were recycled and allotted to the 3rd party under EPR obligation in the month of Jan'23 and Feb'23, The details of the EPR quantity deduction is provided in the revised plastic credit sheet and JPD&MR v1.6. Hence, the CL 11 has been closed.	

Table 2. CAR's from this Joint Validation and Verification

CAR	01	Section no.	Editorial	Date: 22/03/2023
Description of CAR				
During review of the VCS JPD&MR (v1.3) it has been observed that in various sections throughout the report justification of fulfilment of requirements has been provided by specifying what 'will be' done. It does not describe how the requirements have been fulfilled and what mechanism or structure has been put in place and how the project complies with the requirements of the applied standard and the methodology, as is illustrated by the following extracts from the monitoring report: 1. A continuous grievance mechanism is kept in place in the facility, which **will be** publicized and accessible to all project stakeholders, including any interested stakeholders. During the project implementation, the field workers **will be** in close communication with the local stakeholders including the informal waste workers daily. (2.8.1) 2. There will be no potential health impacts because of the project activity (2.3.1) 3. The project will not impact air quality, water quality, soil quality, biodiversity or endangered species of any sought.				
Project participant response				**Date:** 27/03/2023
The corrections have been now done in the revised Joint PD & MR.				
Documentation provided by project participant				
revised joint PD & MR Version 1.4				
VVB assessment				**Date:** 05/06/2023

VVB during the review of the document found that, PP has revised the JPD accordingly and fulfilled the requirements stated above. Hence, CAR 01 is closed.

CAR	02	Section no.	1.1 /1.10	Date: 22/03/2023
Description of CAR				
In the section 1.1 and 1.10 of the VCS JPD&MR (v1.3) it is stated, "The total capacity of the plastic waste recycling facility is 10,000 tons/year (8000 TPA for HPDE & 2000 TPA for PP) and it can be expanded to 15,000 tons/year." However, during the OSV during the interview with PP the VT was informed that the capacity of recycling plant at present is 6000 tons/year and PP plans to expand it to 12000 tons/year at the present location. Considering the above observation, PP shall explain the basis of the statement in quotes and provide the correct information on the capacity of the recycling plant.				
Project participant response				**Date:** 27/03/2023
The 10,000 TPA capacity has been provided as per the Consent order of operation received by the Banyan nation. 6,000 TPA is the current running capacity of the plant which has been now added as well in the project description. Further, PP plans to expand the plant up to 12000-15000 TPA and the highest has been considered as an assumption. The running capacity can be verified during the subsequent verifications.				
Documentation provided by project participant				
revised joint PD & MR Version 1.4				
VVB assessment				**Date:** 05/06/2023
VVB needs a clarification, The 10,000 TPA capacity has been provided through the Consent order by TSPCB for operation to the Banyan Nation then, why the current running capacity of the plant is only limited to 6000 TPA? Further, PP plans to expand the plant up to 12000-15000 TPA and the highest has been considered as an assumption. The running capacity can be verified during the subsequent verifications. So, for this FAR 02 has been raised. Hence, CAR 02 has not been closed.				
Project participant response				**Date: 16/06/2023**
PP would like to explain that during the audited monitoring period running capacity of the plant was limited by the washing line capacity of 1 ton per hour, and extrusion capacity of 1 ton per hour. This is now upgraded to double i.e., 12000 tons.				
Documentation provided by project participant				
-				
VVB assessment				**Date:** 07/07/2023

After evaluating the response provided by the PP, it was noted that the capacity of the washing line and extrusions has been enhanced by an additional 1 ton per hour. This upgrade amounts to a total capacity increase of 12,000 tons. Moreover, in accordance with the earlier assessment conducted by VVB, the utilization of this expanded capacity, ranging from 12,000 to 15,000 tons as per the expansion plan, will be verified during subsequent verifications, specifically referred to as FAR 02. Hence the CAR 02 has been closed.

CAR	03	Section no.	1.1	Date: 22/03/2023
Description of CAR				
In the section 1.1 of the VCS JPD&MR (v1.3) it is stated, PP shall: 1. Provide the locations of collection activity or facilities as required by the JPD&MR template (v1.0) 2. The baseline scenario as described in the referred section doesn't provide a brief description of the scenario existing prior to the implementation of the project for collection activity especially with respect to the project boundary for the same. 3. The pre-project scenario as described for recycling activity is very anecdotal and doesn't clearly discuss the situation with respect to the physical boundary specified for the recycling activity.				
Project participant response				**Date:** 27/03/2023
1. PP would like to clarify that the collection part has been now removed from the revised JPD MR. 2. PP would like to clarify that the collection part has been now removed from the revised JPD MR. 3. Please note that as per the recycling methodology the baseline scenario is -plastic waste would not have been recycled in the absence of the project activity. This methodology uses a project method to determine the crediting baseline. Hence, banyan nation recycling facility is a new facility and before that the HDPE and PP recycled by the plant would have not been recycled. Further, publicly available data also specifies that there is mismanagement of plastic waste as stated in subsequent sections of the Joint PD & MR.				
Documentation provided by project participant				
revised joint PD & MR Version 1.4				
VVB assessment				**Date:** 05/06/2023
VVB during review of documents found that, 1. Collection part of the project has been removed from the revised JPD&MR. So, there is no need to provide locations of collection activity in referred section. 2. PP need not to provide the baseline scenario of the collection activity as it is removed from the project activity. 3. PP has justified the baseline scenario of the project in the referred section of JPD&MR v1.4 with providing the proper values and evidence for the pre project scenario. Hence, CAR 03 has been closed.				

CAR	04	Section no.	1.2	Date: 22/03/2023
Description of CAR				
In the section 1.2 of the VCS JPD&MR (v1.3) the justification provided against template requirement of "Demonstration that the project has not generated plastic waste primarily for the purpose of its subsequent collection and/or recycling" only discusses about how the scrap dealers are geotagged for unique identification and how plastic waste is procured from them. The discussion thus provided is ambiguous and doesn't clearly establish that the project activity doesn't generate plastic waste primarily for the purpose of its subsequent collection and/or recycling.				
Project participant response				**Date:** 27/03/2023

It can be reasonably assumed that the project does not generate plastic waste primarily for the purpose of subsequent collection and/or recycling because:

1. Banyan nation works directly with the waste pickers and scrap dealers who collect waste from unorganized landfills and they geotag scrap dealers/waste pickers available in the area through an online software for supply chain. This is followed by on ground survey of Banyan nation's team to record the volumes of plastic waste collected by the waste pickers. Later on, demand of plastic waste is given to the on-ground aggregators and all orders are recorded on trader's platform developed by the organization.

2. According to the Telangana Pollution Control Board, Hyderabad generates 517.8 tonnes of plastic waste every day or about 188,997 per annum4. If the per capita plastic use is considered, the city civic body is faced with the challenge of handling 108,000 tonnes of plastic waste for a population of nine million. Between this great variation in numbers, Hyderabad is literally drowning in plastic waste5. Further, Banyan nation is focused more towards recycling HDPE & PP which is not recycled so commonly in Hyderabad (as can be checked from the penetration rate calculations in section 3.6). Through the logic of reasoning, Banyan nation does not have to generate plastic waste as it is already in a metropolitan city where the generation of plastic wastes is very high then its recycling.

3. Banyan nation's representatives regularly monitor activities throughout the year on ground. This includes taking photos of collectors and the waste they collect each and visiting communities for regular feedback

Documentation provided by project participant	
revised joint PD & MR Version 1.4	
VVB assessment	**Date:** 05/06/2023
PP has revised and updated the section 1.2 and demonstrated that the project has not generated plastic waste primarily for its subsequent collection and or/recycling by providing proper evidence for the same. Hence, CAR 04 has been closed.	

CAR	05	**Section no.**	1.3	**Date:** 22/03/2023
Description of CAR				
PP shall clearly define what constitutes an instance for recycling activity and collection activity under this grouped project. Furthermore, while defining the instances PP shall consider requirements pertaining to geographical boundary, project ownership and operational control etc.,				
Project participant response				**Date:** 27/03/2023
PP would like to clarify that the collection part has been now removed and the recycling won't be a grouped project since there is no fixed plan on future installation of plants. As per grouped project requirements, we need to mention the planned locations and instances. Hence, the project is now a standalone recycling activity in Hyderabad, India.				
Documentation provided by project participant				

[4] https://www.thehindu.com/news/cities/Hyderabad/hyderabad-drowns-in-plastic-mounds/article29947942.ece

[5] https://www.thehindu.com/news/cities/Hyderabad/hyderabad-drowns-in-plastic-mounds/article29947942.ece

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VVB assessment	**Date:** 05/06/2023
PP has properly justified the CAR 05. As the collection part is removed from the project activity and now the project is not a grouped project so, there is no need of defining instances anymore. Hence, CAR 05 has been closed.	

CAR	06	**Section no.**	1.3	**Date:** 22/03/2023
Description of CAR				
In the referred section of the VCS JPD&MR (v1.3), PP has provided eligibility criteria for grouped projects. However, the provided eligibility criteria are neither sufficiently objective nor comprehensive to permit the assessment of the inclusion of future instances in the grouped project. 1. The table doesn't provide list of objective and verifiable evidence against each eligibility criteria that would be required to assess the fulfilment of the requirement by future instances. 2. The eligibility criteria (for technology/measure, baseline, and additionality) are very generic in nature and doesn't specify the project specific requirements to be evaluated to ascertain their fulfilment. 3. Eligibility criteria with respect to unique identification of future instances and avoidance of double counting is missing. 4. Eligibility criteria for LSC, EIA and regulatory compliances are missing.				
Project participant response				**Date:** 27/03/2023
PP would like to clarify that the project is no more a grouped project.				
Documentation provided by project participant				
-				
VVB assessment				**Date:** 05/06/2023
As per the clarification provided by the PP, collection is removed from the project and now the project is not a group project. So, PP does not need to fill the section "Eligibility Criteria", as it is only for grouped project. Hence, CAR 06 has been closed.				

CAR	07	**Section no.**	1.7	**Date:** 22/03/2023
Description of CAR				
In the referred section of the VCS JPD&MR (v1.3), the project start date is based on the consent of operation obtained for recycling facility. However, the grouped project also includes collection activity and so, PP shall also provide the start date of the collection activity.				
Project participant response				**Date:** 27/03/2023
PP would like to clarify that the collection part has been now removed.				
Documentation provided by project participant				
-				
VVB assessment				**Date:** 05/06/2023
PP has removed the collection part from the project. So, PP does not need to provide the start date for the collection activity anymore. Hence, CAR 07 has been closed.				

CAR	08	Section no.	1.10	Date: 22/03/2023

Description of CAR

The description of the project activity as provided in the referred section of the VCS JPD&MR (v1.3), is not in line with the guidelines as provided in "Joint Plastic Project Description & Monitoring Report Template (v1.0)".

1. Separate description for both plastic waste collection and recycling activity shall be provided.
2. For plastic waste collection projects, it doesn't provide information on the following:
   a. Include a description of the end-of-life of the collected plastic waste (e.g., mechanical recycling).
   b. Where applicable, include a description of the infrastructure, systems and equipment involved in collection activities (e.g., nets, trucks, waste grabbers).
   c. If applicable, provide a list of the infrastructure, systems and equipment that existed prior to the implementation of the project.
3. For plastic waste recycling projects, it doesn't provide information on the following:
   a. Describe the nature and use of the end product (i.e., the recycled or processed material and its next step in the value chain).
   b. Include a list and the arrangement of the main mechanical or chemical recycling technologies, systems and equipment that will be used to process the material. Include in the description information about the age and average lifetime of the equipment based on the manufacturer's specifications and industry standards.
   c. Include the types and scales of services provided by the systems and equipment that are being modified and/or installed in the project.
   d. If applicable, provide a list of facilities, systems and equipment that were in operation prior to the implementation of the project.

Project participant response — **Date:** 27/03/2023

1. PP would like to clarify that the collection part is now removed.
2. PP would like to clarify that the collection part is now removed.
3. a. The nature and end use of end product has been now added.

b. PP would like to state that the list of technologies have been provided as a flow chart in figure 5. Further, detailed information on the recycling technology has been provided in the form of supportives to the VVB and because of confidentiality it is not possible to mention the same in the JPD MR.

c. The detailed information on the recycling technology has been provided in the form of supportives to the VVB and because of confidentiality it is not possible to mention the same in the JPD MR.

d. This is not applicable since no recycling facility existed in the project location before.

Documentation provided by project participant

revised joint PD & MR Version 1.4

VVB assessment — **Date:** 05/06/2023

After reviewing the documents and the clarification provided by PP, VVB has found that,

1. collection activity is removed by the PP from the project activity. So, PP does not need to provide separate description for both plastic waste collection and recycling activity shall be provided.
2. collection activity is removed by the PP from the project activity. So, PP does not need provide the details mentioned above.
3. a. PP has added the nature and uses of the end product in the referred section of revised JPD&MR.

   b. PP has added the figure 5 in the revised JPD&MR v1.4, in which all the detailed information of the technology is provided. But PP has not added the lifetime of the technology in the JPD and the evidence provided for the same does not contain the lifetime of the technologies. PP is requested to add this information in referred section of JPD because this is not a confidential information.

   c. The detailed information on the recycling technology has been provided in the supportive document "ERMA technical specification" shared by the PP.

   d. If there was no recycling facility existed before the prior to project location then PP needs to provide the evidence to prove the same.

Hence, CAR 08 has not been closed.

Project participant response	Date: DD/MM/YYYY

3.b. PP do not have any such assessment report on the lifetime of the washing line / extruder.
For depreciation purpose in Books of accounts, PP is considering the life of 25 Years (Machinery in Continuous Process – Not in the specific plant & machinery list) under companies act, 2013.

d. PP has provided "APPROVED BUILDING PLAN DRAWING" and "Site Plan_Initial_Banyan" to support the claim that there was no recycling facility available at the project location. Please refer "prior banyan-Site Plan Folder"

Documentation provided by project participant

1. prior banyan-Site Plan folder

VVB assessment	Date: 07/07/2023

3. b. PP has clarified that they don't have any such assessment report on the lifetime of the operations technology/equipment's. But as per their books of account the depreciation of the technology/equipment is considered as 25 years of continuous process.

d. The PP has submitted the site drawing approved by TSIIC, dated 13.11.2019. Upon review, it is evident that there were no recycling facilities present at the project location prior to this date.

Hence, the CAR 08 has been closed.

CAR	09	Section no.	1.11	Date: 23/03/2023

Description of CAR

For project location, "Joint Plastic Project Description & Monitoring Report Template (v1.0)". requires the following:

- For grouped projects, include at least one set of geodetic coordinates with sufficient geographic information on the location of the other instances. If geodetic coordinates for each instance are available, provide the coordinates in a KML file.
  - For grouped projects, also include geodetic polygons to delineate the project's geographic area(s).

However, in the referred section of the VCS JPD&MR (v1.3), doesn't provide any such information for the collection activity and the locations.

Project participant response	Date: 27/03/2023

PP would like to clarify that the collection part is now removed, and the project is not a grouped project anymore.

Documentation provided by project participant

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VVB assessment	Date: 05/06/2023

PP has removed the collection activity from the project. So, now the project is not a grouped project and above-mentioned information need not be mentioned.

Hence, CAR 09 has been closed.

CAR	10	Section no.	1.12.2	Date: 23/03/2023

Description of CAR

The description provided the referred section of the VCS JPD&MR (v1.3), is not in line with the requirements as mentioned in the "Joint Plastic Project Description & Monitoring Report Template (v1.0)" as it doesn't provide any information on the following:

(a) information on human health,
(b) working conditions,
(c) labor,
(d) energy consumption,
(e) greenhouse gas (GHG) emissions,
(f) air quality,
(g) water quality,
(h) soil quality,
(i) biodiversity and
(j) ecosystem health.

Project participant response — **Date:** 27/03/2023

The details has been now added in the revised Joint PD MR

Documentation provided by project participant

revised joint PD & MR Version 1.4

VVB assessment — **Date:** 05/06/2023

During review of the referred section, VVB found that the PP has,

a. information on human health - mentioned the details in the JPD&MR V1.4 and is appropriate.
b. working conditions - mentioned the details in the JPD&MR V1.4 and the information's provided is relevant.
c. labor, - mentioned the details in the JPD&MR V1.4 and is appropriate.
d. energy consumption - mentioned the details in the JPD&MR V1.4 and PP has also mentioned that to lower the energy consumption CNG vehicles will be used in future. Therefore, this will be raised in FAR 02 so, that it could be checked in subsequent monitoring period.
e. greenhouse gas (GHG) emissions - mentioned the details in the JPD&MR V1.4 and PP has also mentioned that the to lower the energy consumption CNG vehicles will be used in future. Therefore, this will be raised in FAR so, that it could be checked in subsequent monitoring period.
f. air quality - mentioned the details in the JPD&MR V1.4 and the information's provided is relevant.
g. water quality - not mentioned the details of what is the impact of the project on water quality. Hence, PP shall mention the same.
h. soil quality - mentioned the details in the JPD&MR V1.4 and the details provided are appropriate.
i. biodiversity - mentioned the details in the JPD&MR V1.4
j. ecosystem health - mentioned the details in the JPD&MR V1.4

Hence, CAR 10 has not been closed.

Project participant response — **Date:** DD/MM/YYYY

d The FAR raised is irrelevant now, as delivery from collection points to recycling facilities was previously considered for fossil fuel GHG emissions. Since collection is removed, PP has also eliminated the potential addition of CNG vehicles statement in the revised JPDMR.

g The statement related to water quality has been now updated in the relevant section of the JPDMR

Documentation provided by project participant

Revised JPDMR

VVB assessment — **Date:** 07/07/2023

d. As the PP has eliminated the collection activity from the project, the measures aimed at controlling GHG emissions in transfer of collected material is no longer applicable. Furthermore, it is noted that the statement regarding the addition of CNG vehicles has not been revised in the JPD&MR v1.5. g. PP has now updated the statement related to the water quality in the relevant section of the JD&MR v1.5. Hence, the CAR 10 has been closed.

CAR	11	**Section no.**	1.13	**Date:** 23/03/2023
Description of CAR				
The description provided the referred section of the VCS JPD&MR (v1.3), is not in line with the requirements as mentioned in the "Joint Plastic Project Description & Monitoring Report Template (v1.0)" as it doesn't clearly identify and demonstrate compliance of the project with any relevant local, regional and national laws, statutes and regulatory frameworks.				
Project participant response				**Date:** 27/03/2023
The details has been now added in the revised Joint PD MR				
Documentation provided by project participant				
revised joint PD & MR Version 1.4				
VVB assessment				**Date:** 05/06/2023
PP has now mentioned the relevant local, regional, national laws and applicable regulatory frameworks in the JPD&MR version 1.4. Hence CAR 11 has been closed.				

CAR	12	**Section no.**	2.1.6	**Date:** 23/03/2023
Description of CAR				
The description provided in the referred section of VCS JPD&MR (v1.3), doesn't describe the measures planned to ensure that no entities involved in project design and implementation are involved in, or complicit in, any form of discrimination or sexual harassment with respect to the project.				
Project participant response				**Date:** 27/03/2023
A policy has been kept in place and the same has been shared with VVB.				
Documentation provided by project participant				
revised joint PD & MR Version 1.4				
VVB assessment				**Date:** 05/06/2023
PP has reviewed and revised the Section 2.2.6 and provided policies of Banyan Nation regarding Anti-Discrimination. However, as per the JPD&MR requirements, PP needs to mention these details in the referred section "Describe the measures planned to ensure that no entities involved in project design and implementation are involved in, or complicit in, any form of discrimination or sexual harassment with respect to the project". Hence, CAR 12 has not been closed.				
Project participant response				**Date:** 16/06/2023
PP has revised the section in the updated JPDMR				
Documentation provided by project participant				
Revised JPDMR				

VVB assessment	Date: 07/07/2023
The PP has appropriately updated the details in the correct section, as specified in the assessment. Hence, CAR 12 has been closed.	

CAR	13	Section no.	2.1.7/2.1.8	Date: 23/03/2023
Description of CAR				
The description provided in the referred section of VCS JPD&MR (v1.3), on "Feedback and Grievance Mechanism" doesn't address the following: 1. Appropriateness of the mechanism according to the type of stakeholders involved/affected in the project activity. 2. Grievance escalation and redressal mechanism which depicts provides information on turn-around time, personal responsible etc., Furthermore, PP shall also describe how it has been ensured that is publicized and accessible to all project stakeholders, including any interested stakeholders. Moreover, as the project activity is already implemented and under operation, the Continued Consultation and Adaptive Management shall be provided to the VVB for assessment.				
Project participant response				**Date:** 27/03/2023
1. For the appropriateness of the grievance mechanism, stakeholders who want to maintain the anonymity of themselves can provide feedback in the feedback/complaint box placed within the plant premises. Stakeholders who cannot write or are uneducated have the option of verbally raising any complaints/grievances during workers participation and consultation meetings. For any other stakeholders, open and transparent mechanism of email communication has been provided. 2. Banyan nation has a grievance redressal committee in place for monthly review meetings related to the received grievances and for continued communication and consultation. They have verbal feedback rounds with stakeholders. Refer to section 2.1.5 for further details.				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4, Complaint book scanned copy				
VVB assessment				**Date:** 05/06/2023
During document review, verification team found that PP has updated Sections 2.1.7 and 2.1.8 in JPD v1.4, 1. according to the type of stakeholders involved/affected in the project activity the mechanism applied for feedback and grievance Redress are feedback/complaint box placed within the plant premises. Stakeholders who cannot write or are uneducated have the option of verbally raising any complaints/grievances during workers participation and consultation meetings. For any other stakeholders, open and transparent mechanism of email communication has been provided. 2. For grievance redressal, PP has a committee in place for monthly review meetings related to the received grievances and for continued communication and consultation. They have verbal feedback rounds with stakeholders. PP has also provided Scanned copy of Complaint book, after reviewing all the documents and details. VVB conforms that the PP follows the Continued Consultation and Adaptive Management. Furthermore, PP shall also describe how it has been ensured that is publicized and accessible to all project stakeholders, including any interested stakeholders. Hence, CAR13 has not been closed.				

Project participant response	Date: 16/06/2023
The project is available and can be accessed through Verra's website, i.e., https://registry.verra.org/app/projectDetail/PWRP/3597. In addition, Banyan Nation has a website with a "Contact us" section that includes a message box through which anyone can provide their feedback. The website is located at https://banyannation.com/#contact. Stakeholders will be informed of the public location of the feedback and grievance redressal meeting during any public communications about the project, including stakeholder engagement events. The same has been updated in revised JPDMR.	
Documentation provided by project participant	
Revised JPDMR	
VVB assessment	**Date:** 07/07/2023
The PP has provided clarification that stakeholders will receive information regarding the Verra project registry link, enabling them to access project documents and provide feedback through the "contact us" section on the Banyan Nation website through their feedback and grievance redressal meetings. Hence, the CAR 13 has been closed	

CAR	14	Section no.	2.1.9	Date: 23/03/2023
Description of CAR				
The description provided in the referred section of VCS JPD&MR (v1.3), doesn't describe how full project documentation, including project description documentation and monitoring reports (as they become available through the project lifetime), has been, and will be, made accessible to all stakeholders, especially marginalized and/or vulnerable stakeholder groups.				
Project participant response				**Date:** 27/03/2023
The details have been now provided.				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4				
VVB assessment				**Date:** 05/06/2023
As per the document review, verification team observed that, PP has revised the Section 2.1.9 and mentioned that "the documents are shared on plant and have been informed that they are publicly available on the VERRA website as well (https://registry.verra.org/app/projectDetail/PWRP/3597). They have been further explained about the project documents in a simpler way to understand the process in more detail." Hence CAR14 has been closed.				

CAR	15	Section no.	2.1.10	Date: 23/03/2023
Description of CAR				
The description provided in the referred section of VCS JPD&MR (v1.3), doesn't describe measures taken and communication methods used to inform stakeholders of the project validation and verification process used by the Plastic Program. Include how they will be informed of the validation/verification body's site visit in a timely manner before the site visit occurs, and how direct and independent communication between stakeholders or their representatives and the assessor will be facilitated.				
Project participant response				**Date:** 27/03/2023
The details have been now provided.				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4				

VVB assessment	Date: 05/06/2023
VVB has observed that, PP has updated the referred section 2.1.10 and added the details of how and when the stakeholders will be informed for the validation and verification body's visit on the site. "Stakeholders will be informed of the validation and verification body's site visit in a timely manner before the site visit occurred during validation and 1st MP verification stage verbally and in written (at least a week before) and will be informed in future as well for future verifications. All relevant stakeholders have agreed to provide information and be co-operative in this process. Banyan nation officials will be available to facilitate on-site communication as well." Hence, CAR 15 has been closed.	

CAR	16	Section no.	2.3.1	Date: 23/03/2023
Description of CAR				
The description provided in the referred section of VCS JPD&MR (v1.3), doesn't provide any information on the following: 1. Potential health impacts because of the project activity in the project boundary 2. Potential hazards and safety risks associated with the implementation of the project activity				
Project participant response				**Date:** 27/03/2023
The hazardous waste which are generated during the project are sent to parties that deal with the hazardous waste and the contract has been signed with the concerned party as well. The same has been now mentioned in the revised Joint PD& MR.				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4				
VVB assessment				**Date:** 05/06/2023
During the review of the documents, PP needs to mention the details of, 1. Potential health impacts as a result of the project activity in the project boundary. Even PP has mentioned there are no potential health impact, which is irrelevant. 2. Potential hazards and safety risks associated with the implementation of the project activity. PP has only mentioned that how the hazardous waste are disposed. Further, PP has mentioned Project involves collection of plastic waste in the referred section. PP shall remove it. Hence, CAR 16 has not been closed.				
Project participant response				**Date:** 16/06/2023
1. PP has updated the section in the revised JPDMR. 2. PP has updated the section in the revised JPDMR.				
Documentation provided by project participant				
Revised JPDMR				
VVB assessment				**Date:** 07/07/2023
The PP has revised the mentioned sections in the updated JPD&MR v1.5. Hence, the CAR 16 has been closed.				

CAR	17	Section no.	2.3.3	Date: 23/03/2023

Description of CAR

The description provided in the referred section of VCS JPD&MR (v1.3), doesn't provide any information the following:

1. Details on energy consumption in the project activity and energy efficiencies of the technologies used in the project activity.
2. Details on GHG emissions from the project activity

Project participant response — **Date:** 27/03/2023

The details have been already provided and as per other approved projects in VERRA only the details of what type of energy consumption has been mentioned.

Documentation provided by project participant

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VVB assessment — **Date:** 05/06/2023

PP has only mentioned the details from where the energy consumption is taking place, "The project is consuming electricity from the grid which is generated from fossil fuel and there is potential energy consumption in the form of fossil fuels used to transport waste from collection points to recycling facility". But not provided the details of the GHGs emissions and even not accounted how much GHGs emissions is taking place.

Furthermore, PP is planning to adopt measures like use of CNG transport vehicles etc. in future and will be mentioned during a subsequent monitoring period. Hence, the same will be raised in FAR.

Hence, CAR 17 has not been closed.

Project participant response — **Date:** 16/06/2023

The GHG emissions from electricity consumption for the monitoring period has been now mentioned in the revised JPD MR.

Further, the FAR raised for CNG vehicle is irrelevant now, as delivery from collection points to recycling facilities was previously considered for fossil fuel GHG emissions. Since collection is removed, PP has also eliminated the potential addition of CNG vehicles statement in the revised JPDMR.

Documentation provided by project participant

Revised JPD MR, Version 1.5, Electricity consumption excel sheet

VVB assessment — **Date:** 07/07/2023

In the revised JPD&MR v1.5, PP has now included the updated information regarding electricity consumption and GHG emissions for the monitoring period. Also, the collection activity is now removed from the project so the FAR raised to verify the CNG vehicles utilization is the collection activities is now removed.

Hence, the CAR 17 has been closed.

CAR	18	Section no.	2.3.4	Date: 23/03/2023

Description of CAR

The description provided in the referred section of VCS JPD&MR (v1.3), doesn't provide any information the following especially in accordance with the requirements stated in section 3.14.14 of Plastic waste Standard (v1.0):

1. Water quantity and quality impacts as a result of the project activity in the project boundary
2. Impact on threatened and endangered species as a result of the project activity in the project boundary

Project participant response	**Date:** 27/03/2023
The details have been now provided.	
Documentation provided by project participant	
Revised Joint PD & MR, Version 1.4	
VVB assessment	**Date:** 05/06/2023
Based on the document review, VVB conforms that PP had revised and updated the JPD&MR v1.4 Section 2.3.4 and provided all the details related to impact of project on water quality, soil, air quality as well Biodiversity and ecosystem health. Hence, CAR18 has been closed.	

CAR	19	**Section no.**	3.2	**Date:** 24/03/2023
Description of CAR				
In the referred section of VCS JPD&MR (v1.3), PP has provided justification for fulfilment of the methodology criteria however, the justification doesn't clearly establish how these methodology eligibility criteria are being met i.e., the justification doesn't provide any information on verifiable evidence which could be cross-checked by the VVB to ascertain the fulfilment of the methodology applicability criteria by the grouped project and real case instances. 1. For applicability **criterion #4** of applied methodology PWRM0002, the justification provided doesn't address the following requirements: a. Source of the plastic waste (e.g., household, industrial entity); b. Detailed description of the sorting criteria c. Expected material composition of output waste streams post-sorting, according to material types defined in the latest version of the Plastic Standard d. Information on Credible evidence such as manufacturer specifications or good practice guidance (GPG) must be provided to demonstrate that the technology and/or method used to sort plastic waste is appropriate for the collected plastic waste and the technology or technologies used to recycle the plastic waste. 2. For applicability **criterion #6** of applied methodology PWRM0002, it is stated that **"The project has recording process in line, the dry weight of the final output of the recycling facilities will be recorded and monitored."** However, during the OSV it was observed that the final output of the recycling facility is measured/weighed on 01 ton weighing scale after the pellets are collected in jumbo bags. So, PP shall explain how the recording of the final output of recycling facility is done in-line. 3. For applicability **criterion #7** of applied methodology PWRM0002, the justification provided doesn't address the following requirements: a. Properties of the output of the recycling facility (e.g., presence and/or type of contamination, characteristics of macromolecules, chemical stability) have not been provided to demonstrate quality. b. Credible evidence such as contractual agreements, receipts of sale of recycled material, third-party audits, monthly stock assessment reports have not been provided to demonstrate that the WRCs in the project are being claimed for only the fraction of the output of the recycling facility that is or can be used to produce recycled plastic. 4. For applicability **criterion #8** of applied methodology PWRM0002, the justification provided is very generic and doesn't clearly establish that there is recyclable plastic waste available in the region of the project activity that would not have been recycled in the absence of the project. PP shall provide project specific arguments and evidence. 5. For applicability **criterion #10** of applied methodology PWRM0002, the methodology requires the PP to provide evidence such as proof of how the plastic waste was managed over the three-year period prior to				

implementation of the project activity to demonstrate that the project activity does not compete with other recycling activities and does not divert plastic waste from any historically existing, legally recognized recycling activity.

6. For applicability **criterion #11** of applied methodology PWRM0002, PP shall provide documentary evidence (scrap sales record) to demonstrate that plastic waste that enters the project recycling facility but is not recycled or is lost during the recycling process (e.g., due to contamination) is managed in a way that does not include dumping on open land, in water bodies and/or at dumpsites; open burning; or incineration without energy recovery.

Project participant response	**Date:** 27/03/2023

1. For Criterion 4:
    a. The source of plastic waste has been now added.
    b. The description of sorting criteria has been already provided point wise under the criteria.
    c. The information has been provided on the same along with the SoPs.
    d. The SOP have been provided for the same. It is manual sorting.
2. For criterion 6: The same has been now provided.
3. For criterion 7:
    a. Please note that the technology used for pellet production eliminates over 99% of contaminants. The sample lab test reports have been provided for the same.
    b. There is no contract with buyers of recycled granules. The buyers who are interested to buy the granules share an invoice with banyan nation with specified amount. Sample recycled granules plastic sale invoices have been provided.
4. The same has been now added with publically available data.
5. The same has been now added with publically available data.
6. The scrap sale invoices have been provided.

Documentation provided by project participant
Revised Joint PD & MR, Version 1.4, supportives

VVB assessment	**Date:** 05/06/2023

After reviewing the documents, VVB has conforms that,

1. For Criterion 4,

    a. PP has added the source of plastic waste.
    b. PP has mentioned the sorting details of the plastic waste point wise.
    c. PP has added the expected waste materials post sorting the waste according to the material types of the plastic waste latest standard.
    d. PP has shared the SOPs in which the sorting details are mentioned.

2. For Criterion 6 - PP has added the detailed information about how and when the weight is taken of the plastic granules in the criteria.
3. For Criterion 7,

    a. PP has clarified that, the technology used for pellet production eliminates over 99% of contaminants. The sample lab test reports have also been provided for the same.
    b. PP has shared the plastic waste product sale invoices.

4. For Criterion 8 - PP has provided justification for the sentence, “In the pre-project scenario the plastic waste would not have been recycled”. PP has provided SPCB data for the same.
5. PP has proved that, the plastic waste was managed over the three-year period prior to implementation of the project activity to demonstrate that the project activity does not compete with other recycling activities and does not divert plastic waste from any historically existing, legally recognized recycling activity. PP has provided publicly available data of SPCB for the same.
6. For applicability Criterion 11 – PP have provided documentary evidence (scrap sales record) to demonstrate that plastic waste that enters the project recycling facility but is not recycled or is lost during the recycling process (e.g., due to contamination) is managed in a way that does not include

dumping on open land, in water bodies and/or at dumpsites; open burning; or incineration without energy recovery.

Hence, CAR 19 has been closed.

CAR	20	Section no.	3.2	Date: 24/03/2023

Description of CAR

In the referred section of VCS JPD&MR (v1.3), PP has provided justification for fulfilment of the methodology criteria however, the justification doesn't clearly establish how these methodology eligibility criteria are being met i.e., the justification doesn't provide any information on verifiable evidence which could be cross-checked by the VVB to ascertain the fulfilment of the methodology applicability criteria by the grouped project and real case instances.

1. For applicability **criterion #1** of applied methodology PWRM0001, PP shall provide documentary evidence to substantiate that for collection activity the waste is collected from both formal and informal sectors.
2. For applicability **criterion #2** of applied methodology PWRM0001, it is stated that **"The collection activity is a new activity done by the PP. The same can be verified from the consent order of operation".** However, the consent of operation is for the recycling facility. SO, PP shall explain how the same can be used to demonstrate that that collection activity is a new activity done by the PP.
3. For applicability **criterion #3** of applied methodology PWRM0001, PP shall provide most recent official government data, third-party independent surveys and research, academic research/papers, independent market research or data from industry bodies or local authorities or other credible evidence to demonstrate that sources of the collected waste are clearly identifiable and are existing or potential sources of plastic waste that would have been left or dumped in the environment (including open burning, dumpsites) or incinerated without energy recovery in the absence of the project activity.
4. For applicability **criterion #4** of applied methodology PWRM0001, PP shall provide documentary evidence to substantiate that the collected waste is directly transferred to the recycling facility owned by the PP.
5. For applicability **criterion #5** of applied methodology PWRM0001, PP shall provide documentary evidence (sales invoices generated by the project proponent or goods receipt notes generated by the plastic waste recipient) to substantiate that the dry weight of the final output of collected plastic waste that reaches an appropriate end destination is directly measured and recorded.
6. For applicability **criterion #6** of applied methodology PWRM0001, PP shall provide documentary evidence (Contractual documents between the project proponent and the recipient of the collected waste) to demonstrate that output of the collection activity is not used in any unauthorized, illegal or non-statutory activities within the project boundary.
7. For applicability **criterion #7** of applied methodology PWRM0001, the justification provided by PP doesn't describe how activities of the end destination facility are in compliance with relevant local or national regulations.
8. For applicability **criterion #8** of applied methodology PWRM0001, the justification provided by doesn't unambiguously establish that there is plastic waste available in the region that would not have been collected in the absence of the project.
9. For applicability **criterion #9** of applied methodology PWRM0001, the justification provided by doesn't unambiguously establish that the project activity does not compete with other collection activities or include plastic waste that has been diverted from a historically existing collection activity.

Project participant response — **Date:** 27/03/2023

The collection has been now removed from the revised JPD MR.

Documentation provided by project participant

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VVB assessment — **Date:** 05/06/2023

As the plastic collection part is removed from the project and the JPD is revised accordingly. So, PP does not need to fulfill the above-mentioned requirements.

Hence, CAR 20 has been closed.

CAR	21	Section no.	3.3	Date: 24/03/2023
Description of CAR				
In section 3.2 of the VCS JPD&MR (v1.3), it is stated that the grouped project activity receives plastic waste from multiple sources for both collection (dumpsites, water bodies, and open land) and recycling (unorganized dumpsites, water bodies, and open land, waste management agencies and from the households and/or commercial entities) activity. However, the project boundary description provided in the referred section of the VCS JPD&MR (v1.3), is not in line with the requirements as stipulated under section 3.8 of Plastic Waste Standard (v1.0), section 5 of applied methodology PWRM0001 and PWRM0002 (v 1.1) and section 3.3 of JPD&MR template (v1.0): 1. Project boundary is not described separately for collection and recycling facilities using flow diagrams and the provided flow diagram doesn't contain the minimum information as required under section 5 of applied methodology PWRM0001 and PWRM0002 (v 1.1). 2. The diagram or map of the project boundary doesn't clearly depict the physical locations of the various installations or management activities taking place as part of the project activity. 3. The diagram or map doesn't demonstrate how the installations or management activities in the project boundary are connected to each other. 4. The project boundary table doesn't identify the baseline and project scenario based on the different sources of the plastic waste respective to the type of the activity i.e., collection and recycling.				
Project participant response				**Date:** 27/03/2023
1. The collection activity has been now removed and the project is not a grouped project anymore. 2. The recycling facility map location has been provided. 3. The recycling facility map location has been provided. 4. The sources have been now added in the project boundary table.				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4				
VVB assessment				**Date:** 05/06/2023
After reviewing the revised JPD&MR v1.3 VVB confirms that. 1. Collection activity is now removed from the project document. 2. Recycling facility map location is now added. 3. Sources have been now added in the project boundary table \ Hence, CAR 21 has been closed				

CAR	22	Section no.	3.5	Date: 24/03/2023
Description of CAR				
The grouped project activity includes both collection and recycling activities. However, the description provided in the referred section of the VCS JPD&MR (v1.3), lacks in the following: 1. It doesn't establish the baseline scenario separately for collection and recycling activities. 2. The description provided for establishment of baseline scenario is neither in accordance with requirements of section 3.9 of Plastic Waste Standard (v1.0) nor in accordance with requirements as stipulated under section 6 & 8.1 of applied methodology PWRM0001 and PWRM0002 (v 1.1) 3. Furthermore, the description neither provides guidance for future instances for establishment of baseline scenario nor does it provide information on list of verifiable and objective evidences to be provided by future instances for demonstration of the same.				
Project participant response				**Date:** 27/03/2023
The collection part has been removed from the project and it is not a grouped project activity anymore. The baseline scenario of the recycling has been revised accordingly.				

Documentation provided by project participant	
Revised Joint PD & MR, Version 1.4	
VVB assessment	**Date:** 05/06/2023
After reviewing the responses and the revised document JPD&MR v1.4 provided by the PP, VVB conforms that collection is now removed form the project activity and baseline scenario of the recycling has been revised accordingly. Hence, CAR 22 has been closed	

CAR	23	Section no.	3.6	Date: 24/03/2023
Description of CAR				
In the referred section of the VCS JPD&MR (v1.3), the description provided for "Regulatory Surplus" is not in accordance with the requirements of the applied methodologies PWRM0001 and PWRM0002 (v 1.1). For collection activity: 1. Doesn't list all relevant national, regional and local laws and regulations for plastic waste treatment, and end use specific to recycling in the relevant region. 2. Doesn't demonstrate whether, based on an examination of current practice in the region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically enforced and whether non-compliance with those requirements is widespread in the host country. 3. Doesn't include information on all extended producer responsibility (EPR) schemes relevant to the project activity in the region. 4. Project activity identifies materials collected by type (HDPE & PP). However, an assessment has not been conducted for each material type included in the project activity to determine if legal or regulatory requirements for collection are applicable for these types and demonstrate regulatory surplus for those types. For recycling activity: 1. Doesn't list all relevant national, regional, and local laws and regulations for plastic waste treatment, specific to recycling in the relevant region. 2. Doesn't demonstrate whether, based on an examination of current practice in the region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically enforced and whether non-compliance with those requirements is widespread in the host country. 3. Doesn't include information on all extended producer responsibility (EPR) schemes relevant to the project activity and material types (HDPE & PP) in the region. 4. Project activity identifies materials collected by type (HDPE & PP). However, an assessment has not been conducted for each material type included in the project activity to determine if legal or regulatory requirements for recycling are applicable for these types and demonstrate regulatory surplus for those types.				
Project participant response				**Date:** 27/03/2023
Collection has been removed from the project activity. For recycling activity: 1. The relevant regulations has been listed in section 1.13 of the report however, they all are not mandatory and the project stakeholders are not under any compliance to recycle the plastic waste. The same has been mentioned already in the section. 2. There is still non-compliances with the requirements since there is still a large amount of plastic waste generated. 3. Please note that EPR scheme is regulation for the plastic producers.				

4. Please note that the requirements have been mentioned considering the types of plastic i.e. HDPE and PP.

Documentation provided by project participant

Revised Joint PD & MR, Version 1.4

VVB assessment	**Date:** 05/06/2023

After reviewing the responses provided by the PP, VVB confirms that.

1. Collection has been now removed from the project and updated the JPD&MR v1.4
2. PP is required to provide the research or the evidence w.r.t the point no. 2 for recycling activities mentioned in the CAR to prove the non-compliance.

Hence, CAR 23 has not been closed.

Project participant response	**Date:** 16/06/2023

2. The giant share of unmanaged plastic waste is either burnt, dumped or dropped as litter. Considering the prevailing business-as-usual scenario, it is estimated that by 2030, greenhouse gas emissions from plastics could reach 1.34 gigatons per year. As per a survey undertaken by ICLEI South Asia in 2018, almost 20% of the waste generated in Hyderabad is plastic. Residential areas alone generated around 365 tons per day of plastic waste, which could increase to 495 tons per day by 2025 if no mitigation measures are undertaken. (https://cdkn.org/story/feature-plastic-waste-management-in-hyderabad-india-from-a-linear-to-a-circular-economy)

the plastic recycling industry is mostly managed by the private sector with minimal government interventions, such as by regulations or enforcement to ensure optimal processing efficiencies, environmental pollution control and quality of end-product (Page no. 61) (https://ccet.jp/sites/default/files/2021-01/Plastic%20Waste%20Management%20Strategy%20and%20Action%20plan%20for%20Hyderabad_web_20210119.pdf#page=75&zoom=100,0,0)

Only a fraction of the plastic recyclers registered with the Confederation of Indian Industry (CII) and TAAPMA have the TSPCB clearance. Scientific recycling of plastic waste in an environmentally safe manner is critical for developing a sustainable waste processing system in the city (Hyderabad)-(Page no. 62) (https://ccet.jp/sites/default/files/2021-01/Plastic%20Waste%20Management%20Strategy%20and%20Action%20plan%20for%20Hyderabad_web_20210119.pdf)

The same information has now been updated in section of the revised JPDMR.

Documentation provided by project participant

Revised JPDMR

VVB assessment	**Date:** 07/07/2023

VVB has reviewed the provided research articles and found evident to the statement mentioned in the CAR.

Hence, CAR 23 has been closed.

CAR	24	Section no.	3.6	Date: 24/03/2023
Description of CAR				
In the referred section of the VCS JPD&MR (v1.3), the demonstration of "Penetration Rate" is not in accordance with the requirements of the applied methodologies PWRM0001 and PWRM0002 (v 1.1). Recycling: 1. The penetration rate has not been demonstrated for all type of material managed by the recycling facility. 2. No information has been provided whether the recycling capacity as stated excludes other project activities undergoing validation or that are already registered with the Plastic Program, and plastic waste production (tonnes/year) in the region. 3. In VCS JPD&MR values for only Hyderabad have been considered to demonstrate the penetration rate. However, as per the information provided in the VCS JPD&MR, collection activity is being carried out all over India (refer project boundary for collection activity). Moreover, the methodology requires the relevant region for which the values are being determined must be the same as the collection area of the project activity for all project activities. PP shall explain how this requirement is being met. 4. The methodology requires that values used for demonstration of penetration rate shall not be older than 3 years at the time of validation. However, the data used is from 2019 and validation only commenced in Feb 2023. So, PP shall explain how this requirement is being met. Collection: 1. As per the statistics available on World bank website (https://data.worldbank.org/indicator/NY.GNP.PCAP.CD) the GNI per capita of India is USD 2150 (as of 2021). PP shall explain the source of the value of 2170. 2. PP shall clearly state the region used for demonstration of the requirement that "the population of the region is among the poorest 20 percent in the poverty ranking of the host country as per the applicable national policies and procedures."				
Project participant response				**Date:** 27/03/2023
Recycling: PP has done investment analysis. Collection: It has been removed from the revised JPD MR.				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4, Investment analysis sheet				
VVB assessment				**Date:** 05/06/2023
After revieing the responses provided by the PP, VVB conforms that PP has done the investment analysis to prove the additionality and removed the collection part from the JPD&MR v1.4. Hence, CAR 24 has been closed				

CAR	25	Section no.	5.2	Date: 24/03/2023
Description of CAR				
The information provided in the tables for monitored parameters in the referred section of the VCS JPD&MR (v1.3), has not be duly filled in accordance with the guidance provided in the JPD&MR template (v1.0). 1. **Value:** PP shall provide real monitored value for the parameter 2. **Source of data:** the description has been copied from the methodology. PP shall clearly state the project specific source of data from where the value of parameter has been taken from. 3. **Description of measurement methods and procedures applied:** PP shall specify project specific measurement methods and procedures, any standards or protocols to be followed, and the person/entity responsible for the measurement. Include any relevant information regarding the				

accuracy of the measurements (e.g., make, model, serial number, calibration requirements, accuracy class).
4. **Frequency of monitoring/recording:** PP shall specify project specific measurement and recording frequency for the monitored parameter in accordance with the requirements of the applied methodology.
5. **Quality Assurance/Quality Control (QA/QC) procedures to be applied:** PP shall specify quality assurance and quality control (QA/QC) procedures to be applied, including the calibration procedures.
6. **Equation:** PP shall provide reference of the methodology whose equation has been referred to for the monitoring parameter.

The above-mentioned requirements shall be provided for all the parameters listed in the refereed section of VCS JPD&MR (v1.3).

Project participant response	**Date:** 27/03/2023

1. The real monitored values cannot be provided at the PD section since it is generic. The real monitored values for MP 01 have been added in section 7.1 as per the template requirements.
2. The relevant sources have been added.
3. The method and the person responsible have been provided now. However, there is no mandatory and specific requirement to add the accuracy of the measurements.
4. Frequency of monitoring for each parameter has been now revised.
5. Calibration requirements have been already provided.
6. The reference of the methodology has been now added.

Documentation provided by project participant

Revised Joint PD & MR, Version 1.4

VVB assessment	**Date:** 05/06/2023

After reviewing the documents and the responses VVB confirms that

PP has updated and revised the JPD&MR v1.4 in accordance with the guidance provided in the JPD&MR template (v1.0) for the mentioned observations in the CAR.

Hence, CAR 25 has been closed

CAR	26	**Section no.**	5.3	**Date:** 24/03/2023

Description of CAR

The information provided referred section of the VCS JPD&MR (v1.3), has not be duly filled in accordance with the guidance provided in the JPD&MR template (v1.0). The description provided lacks in following information:

1. The process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters is not provided.
2. The methods for measuring, recording, storing, aggregating, collating and reporting data and parameters is not provided.
3. The procedures for calibrating monitoring equipment and information on the person or entity responsible for calibration has not been provided.
4. The organizational structure, responsibilities and competencies of the personnel that will be carrying out monitoring activities has not been provided.
5. The QA/QC procedure in accordance with the guidelines under section 9.3 of applied methodologies has not been provided.
6. The procedures for handling non-conformances with the validated monitoring plan has not been provided.
7. A line diagrams to display the data collection and monitoring points for collection and recycling activities has not been provided.
8. Information on data management system, including the location, backup, and retention of stored data.

9. No information on data archiving process (which requires data to be archived electronically and stored in a secure and retrievable manner for at least two years after the end of the project crediting period) has been provided.

Furthermore, PP shall explain why a sampling approach, including target precision levels, sample sizes, sample site locations, frequency of measurement and QA/QC procedures have not been provided for collection activities considering that this is a grouped project there can be multiple collection points or recycling facilities in near future.

Project participant response	**Date:** 27/03/2023

The details related to recycling have been now added. The project has no collection part and is not a grouped project anymore.

Documentation provided by project participant

Revised Joint PD & MR, Version 1.4

VVB assessment	**Date:** 05/06/2023

After reviewing the documents and the responses VVB confirms that

PP has updated and revised the JPD&MR v1.4 with the description mentioned in the CAR observation related to the recycling process and removed the collection part and it is not a grouped project anymore.

Hence, CAR 26 has been closed

CAR	27	**Section no.**	6.1	**Date:** 24/03/2023

Description of CAR

In the referred section of the VCS JPD&MR (v1.3), doesn't provide information in accordance with the guidance provided in the JPD&MR template (v1.0) and lacks in following:

1. Doesn't provide information on the implementation and operational status of the project activity during the monitoring period, including information on any events that impacted the plastic waste collected and/or recycled and its monitoring.
2. Description of the installed technologies, technical processes, and equipment.
3. Information on the implementation and actual operation of the project activity, including relevant dates (e.g., construction, commissioning, start of operation). If the project activity consists of more than one site, describe the status of implementation, and start date of operation for each site.
4. If the project activity is implemented in phases, indicate the progress of the project activity achieved in each phase.
5. Description of the installed technologies, technical processes, and equipment, include diagrams, where appropriate.

Project participant response	**Date:** 27/03/2023

1. Please note that the plant was in operation since 05.02.2020 and the plant was shut down between 23-March-2020 to 05-May-2020 due to COVID-19 which has been already mentioned in section 6.1.
2. The same has been now added.
3. The start date of operation is mentioned as 05.02.2020 for the recycling plant in Hyderabad. The collection part has been now removed.
4. This is not applicable.
5. The same has been added.

Documentation provided by project participant

Revised Joint PD & MR, Version 1.4

VVB assessment	**Date:** 05/06/2023

After reviewing the documents and the responses VVB confirms that

1. PP has mentioned the site operational information and also the shutdown information in the section 6.1.
2. PP has now added the description of the installed technologies, technical processes and equipment details.
3. Collection part is not removed form the JPD&MR v1.4
4. The project is now not a grouped project, so this is not applicable.
5. PP has now added the description of the installed technologies, technical processes and equipment details in the relevant sections.

Hence, CAR 27 has been closed

CAR	28	Section no.	6.1.2	Date: 24/03/2023
Description of CAR				
In the referred section of the VCS JPD&MR (v1.3), doesn't provide information on end-of-life destination of the collected or recycled plastic and evidence, such as contractual documents between the project proponent and the recipient of the collected and/or recycled plastic.				
Project participant response				**Date:** 27/03/2023
The information has been now provided. There is no contract with buyers of recycled granules. The buyers who are interested to buy the granules share an invoice with banyan nation with specified amount. Sample recycled granules plastic sale invoices have been provided.				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4				
VVB assessment				**Date:** 05/06/2023
Based on the provided response by the PP it is understood they don't have a contractual agreement with the buyer of the granules instead the interested parties share an invoice with banyan nation with certain value for the required quantity of granules. As per the review of the provided sample invoice it is understood Banyan nation is raising the invoices to the interested parties not the interested parties share invoice as mentioned in the response of the PP. PP has to clarity the process of raising the invoice and challenges in having the contractual agreements. Hence, CAR 28 has not been closed				
Project participant response				**Date:** 16/06/2023
PP has updated the JPDMR with the process of finished goods storage and dispatch process (refer section 6.1.2), Also, the following are the challenges of having a contractual agreement: 1. Fluctuations in virgin prices. 2. Not having a strong R&D team at the customer's end to conduct research and development. 3. Customers not being ready to pay premium prices and being price sensitive towards purchasing PCR (Post-Consumer Recycled) materials.				
Documentation provided by project participant				
Revised JPDMR				
VVB assessment				**Date:** 07/07/2023

In the revised JPD&MR v1.5, PP has updated the process of storing and dispatching finished goods. PP has highlighted the challenges associated with establishing a contractual agreement. However, point number 4 cannot be classified as a challenge; rather, it is considered non-compliance if materials are being sold with non-GST invoices. It is necessary for the materials to be sold to GST compliant manufacturers or producers, adhering to all applicable laws. PP is requested to provide clarification regarding whether any quantity of recycled plastic is being sold without GST. Hence, the CAR 28 has not been closed
Project participant response **Date:** 12/07/2023
PP would like to clarify that the challenge mentioned in point no. 4 was generic and Banyan only sells the material with GST invoices as they have other audits which require this as a mandatory document. They do not sell any granules with non-GST invoices. The point has been removed above to avoid confusion.
Documentation provided by project participant
-
VVB assessment **Date:** 18/07/2023
PP has clarified in its response that the recycled plastic material is only being sent to registered GST parties, and as a result, the previously mentioned point has been omitted from their earlier response. Hence, the CAR 28 has been closed.

CAR	29	**Section no.**	7.2	**Date:** 24/03/2023
Description of CAR				
The description in the referred section of the VCS JPD&MR (v1.3), doesn't provide a summary of the process and schedule followed for monitoring the data and parameters to arrive at the monitoring results as per the requirements of section 5.3 of JPD&MR template (v1.0) and section 9 of the applied methodology.				
Project participant response				**Date:** 27/03/2023
The details have been now provided.				
Documentation provided by project participant				
Revised Joint PD & MR, Version 1.4				
VVB assessment				**Date:** 05/06/2023
Based on the document review, VVB conforms that PP had revised and updated the JPD&MR v1.4 Section 5.3 and provided all the details of monitoring the data and parameters to arrive at the monitoring results as per the requirement. Hence, CAR 29 has been closed				

CAR	30	Section no.	2.1.3	Date: 24/03/2023
Description of CAR				
The description in the referred section of the VCS JPD&MR (v1.3), doesn't provide information on the following: 1. Process of identification and selection of relevant and appropriate stakeholders 2. Methods appropriate to the type of stakeholders and geographical extent of the grouped project activity used to invite the stakeholders for the consultation meeting.				
Project participant response				**Date:** 27/03/2023
1. The details on identification of appropriate stakeholders have been already mentioned in section 2.1.1 of the Joint PD & MR. 2. The project is no more a grouped project activity.				
Documentation provided by project participant				
Revised JPD MR				
VVB assessment				**Date:** 05/06/2023
PP has mentioned the process of identifying the relevant and appropriate stakeholders in the project and methods appropriate to the type of stakeholders and geographical is not required as this is no longer grouped project. Hence, CAR 30 has been closed				

Table 3. FAR's from this Joint Validation and Verification

FAR	01	Section no.	1.8	Date: 05/06/2023
Description of FAR				
In the specified portion of VCS JPD&MR (v1.3), it is indicated that the credit period for the combined project spans from 05/02/2020, to 04/02/2030. Nevertheless, upon document examination, it has come to VVB's attention that the consent and authorization to operate will remain valid only until 31/01/2030. Consequently, the PP has responded, confirming that the consent order will be extended beyond 31/01/2030, and the updated documentation will be provided to the VVB during subsequent verification processes.				
Project participant response				**Date:** 27/03/2023
Please note that the consent order will be renewed after 31/01/2030 and will be shared with the VVB during subsequent verifications. Further, the crediting period has been now revised to 7 years (renewable twice).				
Documentation provided by project participant				
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VVB assessment				**Date:** --
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FAR	02	Section no.	1.1 /1.10	Date: 05/06/2023
Description of FAR				
In the section 1.1 and 1.10 of the VCS JPD&MR (v1.3) it is stated, "The total capacity of the plastic waste recycling facility is 10,000 tons/year (8000 TPA for HPDE & 2000 TPA for PP) and it can be expanded to 15,000 tons/year." However, during the OSV during the interview with PP the VT was informed that the capacity of recycling plant at present is 6000 tons/year. Consequently, in one of their responses against CAR02 PP had responded that the capacity of the plastic waste recycling facility had been expended to 12000 tons/year at the present location. PP plans to expand the plant up to 12000-15000 TPA and the highest has been considered as an assumption.				
Project participant response				Date: 27/03/2023
Further, PP plans to expand the plant up to 12000-15000 TPA and the highest has been considered as an assumption. The running capacity can be verified during the subsequent verifications.				
Documentation provided by project participant				
VVB assessment				Date: -----

APPENDIX 4: COMPETENCY CERTIFICATE

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Amit Anand

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☒ Plastic Waste Expert
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	☒ CCB Expert
☒ Financial Expert	☐ Local Expert for India and South Africa		

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☒ TA 7.1	☒ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☒ TA 13.2
☒ TA 14.1	☒ TA 15.1			

Issue Date	Expiry Date
1st January 2023	31st December 2023

Mr. Vikash Kumar Singh
Compliance Officer

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Sumant Shekhar

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☐ Validator	☐ Verifier	☐ Team Leader	☐ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☒ Plastic Waste Expert
☐ SDG+	☐ Social no-harm(S+)	☐ Environment no-harm(E+)	☐ CCB Expert
☐ Financial Expert	☒ Local Expert for India		

in the following Technical Areas:

☐ TA 1.1	☐ TA 1.2	☐ TA 2.1	☐ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☐ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date

1st January 2023

Expiry Date

31st December 2023

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Abhinav Attuluri

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☐ Validator	☐ Verifier	☐ Team Leader	☐ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☒ Plastic Waste Expert
☐ SDG+	☐ Social no-harm(S+)	☐ Environment no-harm(E+)	☐ CCB Expert
☐ Financial Expert	☒ Local Expert for India		

in the following Technical Areas:

☐ TA 1.1	☐ TA 1.2	☐ TA 2.1	☐ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☐ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date

20th April 2023

Expiry Date

19th April 2024

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☒ Plastic Waste Expert
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	☒ CCB Expert
☒ Financial Expert	☒ Local Expert for India, South Africa, and Spanish speaking countries		

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☒ TA 4.1
☒ TA 4. n	☐ TA 5.1	☐ TA 5.2	☒ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☒ TA 13.2
☒ TA 14.1	☒ TA 15.1			

Issue Date	Expiry Date
1st January 2023	31st December 2023

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023