

“Programme for supporting up-scaled mitigation action in Peru’s solid waste sector”

- Programme Solid Waste NAMA – Peru -

Verification Format

Disposal site name:	
Disposal site code:	
Mitigation Technology:	
Monitoring Period:	<From DD/MM/YYYY to DD/MM/YYYY (both days included)>
Name and position of the person in charge:	
Date:	
Version number of this verification format :	

1- Objective of the Verification

In this section, the objective of the verification must be specified among the aspects mentioned here below. In case, it does not correspond to any of the options or there are additional non-mentioned objectives, please include a brief description in the item "others".

Objective:	
<input type="checkbox"/>	Verification of the reduced GHG within the monitoring period
<input type="checkbox"/>	Verification of the sustainable developments co-benefits
<input type="checkbox"/>	Verification of the information reported in the Monitoring Report
<input type="checkbox"/>	Others (specify): _____ _____ _____

2- Scope of the Verification

In this section, the verification scope must be specified among the aspects mentioned here below. In case, it does not correspond to any of the options or there are additional non-mentioned procedures, please include a brief description in the item "others".

Scope:	
<input type="checkbox"/>	Verification of the monitoring procedures
<input type="checkbox"/>	Verification of the operation and maintenance procedures at the disposal site
<input type="checkbox"/>	Verification of the operation and maintenance procedures of the equipment that is part of the implemented project
<input type="checkbox"/>	Verification of calculation of GHG reductions
<input type="checkbox"/>	Verification of the sustainable development co-benefits of the project
<input type="checkbox"/>	Verification of the reported values evidence
<input type="checkbox"/>	Others (Specify): _____ _____ _____

3- Applied criteria for evaluating the emissions reduction

3.1 – Accuracy level of the calculation

Describe the accuracy level to be applied in the evaluation of the GHG reduction calculations and all that this implies. In the comments, describe if any type of simplification will be used and justify this statement. Additionally indicate the maximum acceptable uncertainty percentage in the calculation.

Accuracy Level of the calculation	
<input type="checkbox"/>	Absolute accuracy
<input type="checkbox"/>	Reasonable accuracy
<input type="checkbox"/>	Limited accuracy
	<p>Comments:</p> <p>Simplifications:</p> <p>Uncertainty:</p>

3.2 – Procedures for instrument errors

Describe the procedures to be used in case errors are found in the instrument's calibration, for both direct errors or not complying with the manufacturer's established time for regular calibration of the instrument (e.g. eliminate/deduct values, apply default values, apply percentage of error, etc.). Justify such procedures:

4.2 – Interviews

Describe, if applicable, who will be interviewed, what is the purpose of the interview and the aspects to be verified through the interview.

Interviewed staff, function and assigned tasks:	Purpose of the interview and aspects to be verified:	Verification period:	Procedures for irregularities:

4.3 – Field visits

Briefly describe if you are planning to conduct field visits and what do you intend to verify through this:

4.4 – Review of documentation

Explain, in addition to the monitoring and report format, what other documents have you plan to review or use for completing this report:

5- Verification of Parameters and Calibration

5.1 – Verification of Parameters

In this section, the parameters to verify based on the installed technology at the disposal site must be explained. For each parameter, explain the selected values to verify, the procedure used for its verification and the parameters values before and after the verification. Add as many lines as you need.

Technology applied at the disposal site	<input type="checkbox"/> T1: Landfill gas capture and flaring without electricity generation <input type="checkbox"/> T2: Landfill gas capture and flaring with electricity generation <input type="checkbox"/> T3: Composting <input type="checkbox"/> T4: Mechanical Biological Treatment		
Parameters to verify:	Selected dates and hours:	Value of the reported parameter:	Value of the verified parameter:
Parameter 1 <Insert name of parameter 1>			
Parameter 2 <Insert name of parameter 2>			
Parameter 3 <Insert name of parameter 3>			
Parameter 4 <Insert name of parameter 4>			
Parameter 5 <Insert name of parameter 5>			
Parameter 6 <Insert name of parameter 6>			
...			

5.2 – Verification of monitoring equipment calibration procedures

Check the monitoring instruments whose calibration will be verified based on the technology installed in the project. For each device, check the requirements set forth by the manufacturer, explain the calibration dates reported in the monitoring and report formats, such calibration due date and verification results in terms of the appropriate calibration procedures of the device during the reported monitoring period (e.g. verify that the reported calibration period in the monitoring and reporting format are consistent with those reported in the calibration certificates).

Technology applied at the disposal site	<input type="checkbox"/> T1: Landfill gas capture and flaring without electricity generation <input type="checkbox"/> T2: Landfill gas capture and flaring with electricity generation <input type="checkbox"/> T3: Composting <input type="checkbox"/> T4: Mechanical Biological Treatment			
Device to verify:	Calibration requirement according to manufacturer:	Reported calibration dates through certificates:	Calibration due date:	Verification of the appropriate calibration procedure during the reported monitoring period:
Device 1 <i><Insert the name of Device 1></i>				
Device 2 <i><Insert the name of Device 2></i>				
Device 3 <i><Insert the name of Device 3></i>				
Device 4 <i><Insert the name of Device 4></i>				
Device 5 <i><Insert the name of Device 5></i>				
Device 6 <i><Insert the name of Device 6></i>				
...				

6- Evaluation of calculation of reductions

6.1 – Verification of the baseline emissions

In this section, it is recommended to conduct again the baseline emissions estimated for each monitoring period to be verified and report possible irregularities or mistakes on them:

Technology applied at the disposal site	<input type="checkbox"/> T1: Landfill gas capture and flaring without electricity generation <input type="checkbox"/> T2: Landfill gas capture and flaring with electricity generation <input type="checkbox"/> T3: Composting <input type="checkbox"/> T4: Mechanical Biological Treatment		
Monitoring Period to verify:	Value of the baseline emissions reported in the monitoring and report format:	Verified Value:	Description of eventual irregularities or mistakes:
Period 1 <Insert dates Period 1>			
Period 2 <Insert dates Period 2>			
Period 3 <Insert dates Period 3>			
Period 4 <Insert dates Period 4>			
Period 5 <Insert dates Period 5>			
Period 6 <Insert dates Period 6>			
...			

6.2 – Verification of project emissions

In this section, it is recommended to conduct again the project emissions calculation for each monitoring period to be verified and report possible irregularities or mistakes on them:

Technology applied at the disposal site	<input type="checkbox"/> T1: Landfill gas capture and flaring without electricity generation <input type="checkbox"/> T2: Landfill gas capture and flaring with electricity generation <input type="checkbox"/> T3: Composting <input type="checkbox"/> T4: Mechanical Biological Treatment		
Monitoring period to verify:	Value of the project emissions reported in the monitoring and report format:	Verified Value:	Description of eventual irregularities or mistakes:
Period 1 <Insert dates Period 1>			
Period 2 <Insert dates Period 2>			
Period 3 <Insert dates Period 3>			
Period 4 <Insert dates Period 4>			
Period 5 <Insert dates Period 5>			
Period 6 <Insert dates Period 6>			
...			

6.3 – Verification of the emissions reduction

In this section, it is recommended to conduct again the emissions reduction calculations for each period to verify and report the possible irregularities or mistakes of them:

Technology applied at the disposal site	<input type="checkbox"/> T1: Landfill gas capture and flaring without electricity generation <input type="checkbox"/> T2: Landfill gas capture and flaring with electricity generation <input type="checkbox"/> T3: Composting <input type="checkbox"/> T4: Mechanical Biological Treatment		
Monitoring period to verify:	Value of the emissions reduction reported in the monitoring and report format:	Verified Value:	Description of eventual irregularities or mistakes:
Period 1 <Insert dates Period 1>			
Period 2 <Insert dates Period 2>			
Period 3 <Insert dates Period 3>			
Period 4 <Insert dates Period 4>			
Period 5 <Insert dates Period 5>			
Period 6 <Insert dates Period 6>			
...			

7- Evaluation of other aspects to be monitored

7.1 – Managing the disposal site

Include the evaluation of managing the disposal site based on the results obtained up to date. Include a description of eventual bad practices, including the responsible person and tasks.

7.2 – Legal aspects

Describe the verification assessment of the validity and status of the permits and licenses required for the operation of disposal site activities. Include an evaluation on the ongoing legal administrative proceedings, if applicable.

7.3 – Economic Aspects

Verify the final investment value and operation and maintenance costs (O&M) reported in the monitoring and report format for the periods to be verified. In addition, break down the verification for the starting up process of the mitigation technology and MRV system implementation, following the scheme proposed below.

Starting up of the mitigation technology			
Monitoring period	Reported investment	Reported O&M Costs:	Verified values:
Period 1 <Insert dates Period 1>			
Period 2 <Insert dates Period 2>			
Period 3 <Insert dates Period 3>			
Period 4 <Insert dates Period 4>			
Period 5 <Insert dates Period 5>			

MRV system implementation			
Monitoring period	Reported investment	Reported O&M Costs	Verified values:
Period 1 <Insert dates Period 1>			
Period 2 <Insert dates Period 2>			
Period 3 <Insert dates Period 3>			
Period 4 <Insert dates Period 4>			
Period 5 <Insert dates Period 5>			

7.4 – Sustainable development co-benefits

Evaluate the sustainable development co-benefits reported in the monitoring and report format by completing the following table

Co-benefits	Description	Reported Value:	Verified Value:
Job creation	Describe the number of Jobs created during the monitoring period differentiating between short and long term jobs		
Economic growth	Explain the investment done at the disposal site for the project implementation. If there are new commercial or industrial activities or business opportunities related to the project, name them. And describe new infrastructures at the disposal site		
Technology transfer	Describe the technologies implemented in the Project differentiating between new technologies and adaptation of technologies. Describe if training measures related to such technologies have been conducted		
Energy (diversification and conservation of energy sources, energy safety)	Describe which was the energy reliance of the disposal site before the implementation, how has the situation changed and what is the reason for this change. Inform any change on the waste transport distance that has occurred.		
Payment Balance	Describe the approximate energy expenses before and after the project implementation		
Increase of savings and revenues	Describe total savings due to the implementation of the project during the monitoring period at the disposal site compared to the situation in the absence of the project. Differentiate between the savings caused by the energy reliance, savings in leachate treatment costs and savings in the equipment maintenance		
Health and Safety (improvement on sanitary conditions and health standards)	Describe the improvements observed during the sanitation and waste management at the disposal site		
Education (facilitate the access to education, provide information, investigation or increase of awareness)	Describe if dissemination programmes have been conducted on the implemented activities or training programmes for workers.		
Welfare (Improve working and local life conditions)	Describe the improvements in the observed working conditions, describe the potential improvement in the purchasing power of the workers and if any activity has been conducted that implies the involvement of the people of the area (e.g. waste segregation, etc.)		



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Reduction of local environmental impacts	Describe if there is a reduction of odours, ashes, noise, dust., SOx, NOx, if there is a reduction of the number of explosions and fires, if there is an improvement in the amount, quality and ecological situation of the water from the site, if manure, mineral fertilizers or other soil nutrients have been produced derived from the implementation of the project and if there is an improvement on the life time of the products and equipments usually used at the disposal site.		
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8- Verification Findings

Explain the findings found during the verification and the corresponding monitoring period if applies. Differentiate among those that must have been revised before completing the verification and those that must have been revised before the coming verification.

Finding:	Monitoring Period:	Mark this option such finding should have been revised before completing the verification:	Mark this option if such finding should have been revised before the coming verification:
	Period 1 <Insert dates Period 1>	<input type="checkbox"/>	<input type="checkbox"/>
	Period 2 <Insert dates Period 2>	<input type="checkbox"/>	<input type="checkbox"/>
	Period 3 <Insert dates Period 3>	<input type="checkbox"/>	<input type="checkbox"/>
	Period 4 <Insert dates Period 4>	<input type="checkbox"/>	<input type="checkbox"/>
	Period 5 <Insert dates Period 5>	<input type="checkbox"/>	<input type="checkbox"/>

9- Evaluation conclusions

Explain the main conclusions of the verification conducted among those mentioned. Quote any other relevant conclusion in the item "others".

Conclusion:	
<input type="checkbox"/>	Verification of the GHG reduction calculation during the reported monitoring periods
<input type="checkbox"/>	Verification of the correct calibration of the monitoring and measuring instruments
<input type="checkbox"/>	Verification of the reported sustainable development co-benefits
<input type="checkbox"/>	Verification of the accuracy of the reported parameters
<input type="checkbox"/>	Others (Specify): _____ _____ _____ _____