



PROCEDURE FOR THE VERIFICATION OF GHG STATEMENTS



PT. TÜV NORD INDONESIA

PROCEDURE FOR THE VERIFICATION OF GHG STATEMENTS

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PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
	Issued Date	24 January 2022
	Page	1 of 56
Procedure For The Verification Of GHG Statements		

Table of Content

Table of Content	1
List of table	2
Revision Sheet.....	2
1. Purpose	3
2. Scope	3
3. Definitions	3
4. Responsibilities	3
5. Reference	4
6. Procedure.....	5
6.1 Pre-engagement	5
6.2 Prerequisites Verification	9
6.3 Verification Team Selection	10
6.4 The Duration of the Verification	11
6.5 Verification	14
6.5.1 Planning.....	14
6.5.2 The Execution of Verification.....	37
6.5.3 Completion	40
6.5.4 Verification Report.....	45
6.5.5 Independent Review.....	46
6.5.6 Issuance Opinion.....	46
6.6 Special Verification	48
6.7.1 Fact Discovered After the Verification	48
6.7.2 Complaint	49
6.7 Communication and Record	49
6.7.1 Information provided to a client or responsible party	49
6.7.2 Communication of responsibilities to a client or responsible party	50
6.7.3 Record	50
7. Applicable Documents.....	50

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	2 of 56

List of table

Table 1. Scoring of Data Management System	11
Table 2 The Complexity for Determination the Duration of Verification	12
Table 3 Level of Complexity	13
Table 4 Minimum Duration of Verification Time	13
Table 5 Result of Materiality Assessment	17
Table 6 Relationship IR and CR	18
Table 7 Risk Attribute (IR, CR, DR)	19
Table 8 Detection Risk Result	21
Table 9 Type of Opinion	42
Table 10 Correlation between Type of Misstatement and Type of Opinion	44



PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
	Issued Date	24 January 2022
	Page	2 of 56
Procedure For The Verification Of GHG Statements		

Revision Sheet

Number	Revision Number	Revision Date	Section Number	Revision Notes
1	01	17 November 20	Point 1-7	Update all activities/process based on the updated standard
2	02	8 December 2020	6.5.1.E	Delete point Site Visit
			6.4	Add calculation the duration of verification
3	03	25 Februari 2021	5	Delete ISO 17029:2019
			6.1	Replace form Quotation to FGHG-TNI-019
			6.3.1	Add point verifier competences
			6.5.2	Add statement regarding access to internal or external expertise
			6.5.6	Add GHG statement shall be available to intended user
			7	Add form FGHG-TNI-010, FGHG-TNI-018, FGHG-TNI-019
4	04	12 March 2021	1	Revision section of verification
			6.1	Add pre engagement, remove point preliminary meeting
			6.3, 6.4	Add “...to be approved by Head of Certification Body or Operation Manager SCS or QHSE Manager or Board of Director...”
			6.5.6	Add regarding decision process
			6.6	Add form special verification , replace form questionnaire
5	05	21 June 2021	All section	Revise all parts to adjust the standard of ISO 14064-3
			6.1	Delete “The sales does not validate and verify GHG....”
			Page: 4, 5, 7, 23	Delete “Validation” Word

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
	Issued Date	24 January 2022
	Page	3 of 56
Procedure For The Verification Of GHG Statements		

Number	Revision Number	Revision Date	Section Number	Revision Notes
			5.6	"ISO 14066:2011, Green House Gas...."
			6.5.2	Change "Validation" Word to "Verification" Word
			Page: 4, 7, 14, 15, 17, 22	Change "Project" word
			Page: 9, 10, 14, 17	Delete "Project" Word
			6.5.1	Change "Type of Risk" Sentence
			6.1	Change "Competent Verifier" Sentence
			6.5.3	Change "Non Conformity" Words to "Misstatement"
			6.5.6	Delete Sentence
			6.7	Add "for 10 years of shelf life"
6	6	06 September 2021	6.1	Add sentences in the verification criteria
			6.4	revise mandays calculation
			6.5.2	Add sentences
			6.5.3	Add category material NC Add table 9 and table 10
			6.5.4	Add material NC
			6.5.5.	Delete last paragraph and moved to point 6.1
			6.5.6	restructure sentences
7	7	10 September 2021	6.5.1.A	Add type of document that submitted by client/RP
			6.5.1.B	Revise section of risk attribute, add requirements condition if RA conducted on site or off site
			6.5.1.C	Revise GHG information system and control, GHG data and information
8	8	24 Januari 2022	5	Update standard references
			1	Add verification program
			6.5.5	Add points in independent review

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	3 of 56

1. Purpose

This documented procedure as verification program to describes the procedure for verification of GHG Statement.

The verification is divided into the following sections:

- Pre-engagement
- Offer submission and contract
- Strategic Analysis & Risk Assessment
- Evidence gathering activities
- Verification Plan and Evidence gathering plan
- Verification
- Drafting of report
- GHG Opinion

The verification does not necessarily have to cover the entire organisation. Based on the agreement between the client and TÜV NORD Indonesia, individual areas that are separated from one another, such as for example, individual facilities or locations of an organisation, a single building or a special department within the organisation or company can be verified. This documented procedure ensures that the verifications are conducted in accordance with unified rules with regard to the procedure, personnel and working materials used, and therefore that consistent evaluation is achieved.

Arrangement the development process for each new verification criteria in which it wishes to operate based on request client or intended user are describe specify in the procedure PGHG-TNI-03.

2. Scope

The procedure is applicable for all positions and personnel involved in the verification process.

3. Definitions

In general, the key words used in this procedure refers to the reference in point 5.0 of this document

4. Responsibilities

- 4.1 Head of Certification Body is responsible to supervise and approve the verification activities
- 4.2 Operation Manager SCS is responsible to manage and supervise the verification activities

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	4 of 56

- 4.3 Verifier is competent and impartial person with responsibility for performing and reporting on a verification activities
- 4.4 Independent reviewer is competent person who is not member of the verification team who reviews the verification activities and conclusion

5. Reference

- 5.1 MI-TNI-01, Manual Integrasi
- 5.2 ISO 14064-1:2018 , Greenhouse gases – Part 1 : Sepesification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- 5.3 ISO 14064-3:2019 , Greenhouse gases – Part 3 : Sepesification with guidance for the verification of greenhouse gas statements
- 5.4 **ISO 14065:2020, General Principles and Requirements for Bodies Validating and Verifying Environmental Information**
- 5.5 **ISO/IEC 17029:2019, Conformity Assessment – General Principles and Requirements for Validation and Verification Bodies**
- 5.6 ISO 14066:2011, Greenhouse gases – Competence requirements for greenhouse gas validation teams and verification teams
- 5.7 IAF MD 6 : 2014, issue 2 , IAF Mandatory Document for the Application of ISO 14065:2013
- 5.8 KAN-K-10, Persyaratan Khusus Akreditasi Lembaga Validasi dan/atau Verifikasi GRK
- 5.9 KAN-K-10.1, Persyaratan Khusus Akreditasi Lembaga Validasi dan/atau Verifikasi GRK Sektor Informasi Lingkungan

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	5 of 56

6. Procedure

6.1 Pre-engagement

The verification begins with an inquiry from the client/responsible party to PT TÜV NORD Indonesia. The sales will inform the verification requirements to prospective client or responsible party. Following the inquiry, an offer questionnaire (**FGHG-TNI-020**) is sent to the company. All those processes will be carried out as the pre-engagement process.

The pre-engagement can be in the form of a personal meeting on site or can take place with the help of modern media. It must be ensured that all named aspects are agreed, understood by all those involved and recorded in writing.

If following the preliminary meeting, it cannot be finally established that the client is ready for the verification, the verification procedure is broken off after the preliminary meeting.

The preliminary meeting is a basic element of the strategic analysis and is held before the verification itself, in order to ensure the feasibility of the verification applied for, in order to get to know the object of testing well and in order to prepare the risk analysis which forms the basis for planning of the verification itself.

During the preliminary meeting, the Sales reaches agreement with the client mainly regarding the following points:

- **Type of Engagement** : the engagement type specified in verification is Single Engagement

Things that need to be confirmed and informed in the pre-engagement are:

1. Determine Level of Assurance (limited or reasonable)
2. Define the verification objectives either for Client or Responsible Party and for the Verification Body
3. Determine the verification criteria either for client or responsible party and for Verification Body
4. Determine the verification scope related to the reporting limit and period either for client or responsible party and for the verification body
5. Determine the materiality level that agreed between the client and the verification body

- **Level of assurance**: degree of confidence in the GHG Statement. The level of assurance shall to be applied and consider the needs of the intended user.

The level of assurance shall be specified prior to the start of the verification because the level of assurance establishes the nature, extent and timing (design) of the evidence-gathering activities.

A verifier shall not change level of assurance once agreement has begun. If a change in level of assurance is justified the verifier shall:

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	6 of 56

- a) Document the reasons for the change
- b) Start a new verification at different level of assurance

An insufficiency in the criteria or evidence cannot be addressed by changing the level of assurance. Insufficiencies of criteria shall be addressed by communicating with the creator of the criteria. Inadequacy or insufficiency of evidence shall be addressed in the same manner in limited assurance engagements as they are in engagements performed at a reasonable level of assurance

There are two levels of assurance:

- a. reasonable assurance
 - verification risk is reduced to an acceptably low level
 - high but not absolute level of assurance
 - positive form of opinion
- b. Limited Assurance
 - verification risk is higher than in reasonable level of assurance
 - nature, timing and extent of evidence gathering activities is deliberately less but still results in assurance meaningful to intended users
 - negative form of opinion

Level of Assurance is determined according to the needs/requirements of the intended user/GHG program:

The Limited Assurance will be determined if the requirement fulfilled as below:

1. GHG Statement
2. Complete Report
3. Recapitulation & Consolidation Data

Whereas the Reasonable Assurance needs:

1. GHG Statement
2. Complete Report
3. Recapitulation & Consolidation Data
4. Sites and Facilities Data
5. Secondary Data
6. Site Specific Data (Observation and Primary or Raw Data)

- **Objectives** : the verifier and client shall agree on the verification objectives at the beginning of the verification engagement, verification objectives shall include reaching a conclusion about the accuracy of the GHG Statement and the conformity of the statement with criteria. Verification objectives shall include an assessment of the likelihood that implementation of the GHG related activities will result in the achievement of GHG outcomes as stated by the responsible party, if included in the verification scope.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	7 of 56

- **Criteria** : is policy, procedure, or requirement that used as a reference for comparison to the GHG statement, verifier and client shall agree on the criteria taking into account the principles and requirements of the standard or GHG programme to which subscribed by Responsible Party, verifier shall assess the sustainability of the criteria proposed by the client, considering:
 1. The method for determining engagement scope and boundaries
 2. GHGs and sources, sinks, and reservoirs (SSRs) to be accounted for
 3. Quantification methods;
 4. Requirements for disclosures

The criteria shall be:

1. Relevant, complete, reliable, and understandable
2. Available to the intended user
3. Referenced in the opinion

The criteria for verification are as follow:

- ISO 14064-1; or
- Regulated GHG program which is publicly available and has been developed using a formal stakeholder engagement process; or
- Publicly available GHG program (e.g. World Resources Institute and World Business Council for Sustainable Development [WRI/WBCSD] GHG protocol) and has been developed using a formal stakeholder engagement process; or
- Non-public industry or sector protocols; in this case, the verification criteria shall additionally include either ISO 14064-1 dependent on whether the protocol relates to organisation GHG statement . The resulting verification statement shall clearly state whether the non-public industry or sector protocol conforms to ISO 14064-1 and if the protocol does not conform it shall state where the discrepancies are (please refer to the 14064-1 checklist FGHG-TNI-016), the verifier shall do the gap analysis to find the discrepancies against 14064-1 on pre-engagement phase.

Responsible Party shall choose one of the above verification criteria.

When verification criteria include ISO 14064-1, If the client chooses to issue a public GHG report which is verified by PT TÜV NORD Indonesia as the verification body will confirm that the GHG report conforms to the applicable requirements for a GHG report (reference of ISO 14064-1). The verifier shall first verify their GHG report. The verification process coincides with the verification of their GHG statement and the supporting data.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	8 of 56

- **Scope:** at the beginning of the process, verifier and client shall agree on the verification scope. The scope shall include at least as follow:
 1. boundaries, (Organization Boundaries and Reporting Boundaries)
 2. facilities, physical infrastructure, activities, technologies and processes
 3. GHG SSR (quantified)
 4. types of GHGs (quantified)
 5. Time Period
- **Materiality:** a concept whereby a single or aggregate statement error can influence the decision of the intended user. Meanwhile, Material is information that can influence the user's decision.

The Verification Body shall confirm the materiality threshold required by the intended users and/or Responsible Party. If no materiality threshold has been specified by intended users, the verifier shall set (a) materiality threshold and (b) communicate them to the client, as below:

(a) Materiality threshold:

- 5% : for organization level
- 7% : Facilities level
- 10% : Level of GHG Emissions

(b) Agreed via Questionnaire (FGHG-TNI-020)

The GHG programme can establish a threshold for materiality. Materiality has qualitative and quantitative components;

Quantitative materiality refers to error in value in the GHG statement, example include misstatements, incomplete inventories, misclassified GHG emissions or misapplication of calculations

While the qualitative materiality refers to intangible issues that affect the GHG statement, example include:

- a) Control issues that erode the verifier's confidence in the reported data
- b) Poorly managed documented information
- c) Difficulty in locating requested information
- d) Noncompliance of materiality is used in designing the verification and in assessing the evidence to come to a conclusion

The concept of materiality is used in designing the verification and in assessing the evidence to come to a conclusion

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	9 of 56

Following the return of the offer questionnaire but before issue of the offer itself, a contract review is carried out and review the information received to determine potential risks to impartiality. This ensures that all necessary resources and technical competences for the desired verification are available. The last page of form **FGHG-TNI-020** should be used for the contract review. The contract review must be carried out by Application Reviewer who is Technical Competence or Personnel that have equal competency with the verifier.

If the result of the contract review is negative, the company which sent the inquiry must be informed that a corresponding verification cannot be carried out, or cannot be carried out based on the desired conditions.

If the result of the contract review is positive, drafting of the offer can begin. In so far as it is not agreed to the contrary, the offer will be drawn up within one week following receipt of the inquiry and will then be sent to the client. The time needed for the verification and also the offer price should be calculated by Sales. Offer template **FGHG-TNI-019** should be used for this purpose.

While preparing the offer it has to be ensured that, taking into consideration the competences required in the verification process, an appropriate verification team is available. The verification team has to be disclosed to the client prior to the verification itself. The client has the possibility of rejecting one or several verifier within a specified period. If the client does this, the team has to be newly formed.

Each offer is signed by Operation Director. The sales responsible for the calculation must check the offer with regard to the following:

- Is it possible to assemble an verification team fulfilling the necessary competences and sector-specific knowledge in order to perform the proposed verification (scope and sector competence)
- Are there conflicts of interest between the service offered and other services or contractual agreements of the verification team or the company TÜV NORD Indonesia

During the contract review process, the offer and contract is released with form FGHG-TNI-019 Quotation Form and FMLF-TNI-074 Annex 1F.1 Contract for The Verification of GHG.

The verification can begin at the earliest after the offer and contract or a copy of those documents are sent back to TÜV NORD Indonesia with the authorised signature(s) and company stamp of the client. The verification team leader agrees upon the dates for the verification with the responsible contact person of the client.

6.2 Prerequisites Verification

The requirements for the verifier and for the client (Organisation) regarding verification are defined in ISO 14064 Part 3. The following basic prerequisites must be fulfilled by the client:

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	10 of 56

- The client must provide the verification Team Leader with sufficient and complete information, in order that the team leader can perform the verification based on the documents. The client places the order for the verification with TÜV NORD Indonesia.
- The client is responsible for calculation of GHG emission. The software used must be made accessible to the verifier, in the same way as all the documents relevant to the calculation.

6.3 Verification Team Selection

The verification team has to be approved by Head of Certification Body or Operation Manager SCS or Board of Director prior to the verification.

The verification team should consist of a Team Leader and a suitable combination of verifier and / or independent experts. Verification team leader shall have the competence based on the procedure PGHG-TNI-02. At least one team member must have the suitable sector competence. Generally it should be ensured, that all team members (except trainees) are appointed verifier for verification according to ISO 14064-3. In cases where no verifier is available who covers both, the scheme competence and the sector competence for the company to be verified, a technical can be involved. It is not necessary for the technical expert (sector competence) to join the on-site verification. If the technical expert is not joining the on-site, he has to discuss relevant processes with respect to verification body with the other team members prior to the verification. The team members should know all possible sources of process emissions and how to measure those emissions.

The verifier selected for the verification must:

- demonstrate competence (**Procedure PGHG-TNI-002**)
- be independent,
- avoid all conflicts of interest with those responsible for the verification and with intended users of the verified of GHG
- demonstrate ethical behaviour during the verification,
- create true and precise verifications, findings and reports; fulfil the requirements of the standard or the GHG programme used as a basis.
- have sufficient competence for managing the type and range of its verification activities

A detailed description of the requirements for verifier for the performance of the verification described here can be found in procedure **PGHG-TNI-002**. In so far as the verification takes place within the framework of a GHG programme, the verifier must have detailed knowledge of this programme. If further competences should be needed with regard to the legal framework or language in a particular country, further suitable members must be added to the team.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	11 of 56

6.4 The Duration of the Verification

The verification time is time needed to plan and accomplish a complete and effective verification of the client organization's. The duration of verification time is part of verification time spent conducting verification activities from the opening meeting to the closing meeting, inclusive.

The verification time includes the **total** time **on-site** at a client's location (physical or virtual) and time spent **off-site** carrying out document review, verification planning, interacting with client personnel and report writing. The duration of a verification should typically not be less than 80% of the verification time calculated on the table 4. Where additional verification time is required for planning and/or report writing, this will not be justification for reducing the on-site duration of verification.

The time allocation of verification is divided into verification planning (SA, RA, EGA, EGP) and execution of verification with the proportion 50% - 50% of verification time as a default or 30%-70% with further justification from Lead Verifier.

Travel (en-route or between sites) and any breaks are not included in the on-site duration of verification.

The time allocation shall be prepared by Sales, reviewed by the verifier and recorded by the verification on **FGHG-TNI-02**. The release of verification effort and team shall be approved by Head of Certification Body or Operation Manager SCS prior to the verification. The minimum duration of verification is determined based on a combination of number of GHG Sources and the complexity.

The complexity is based on three considerations:

- Annual total emission
- Publication of Emission report
- LoA
- Type of GHG
- Data Management System
- Number of Sub category

The range of Data Management System is obtained by the total score on the table 1.

The score is obtained by the questionnaire that is filled by client/RP.

Table 1. Scoring of Data Management System

No.	Data Management System		Score
1.	Degree of automation	data management systems is automated	0
		data management systems is manual components	5
2.	Use of database features	data management systems is based on data warehouses or databases	0
		data management systems is based	5

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
	Issued Date	24 January 2022
	Page	12 of 56
Procedure For The Verification Of GHG Statements		

No.	Data Management System		Score
		on spreadsheets or hard copies.	
3.	Length of operation	data management systems has been operational for several years	0
		data management systems has just been implemented	5
4.	Linkage to other systems	data management systems that is linked in with operational systems or financial systems are usually of higher quality than those are stand-alone.	0
		data management systems is stand-alone.	5
5.	Standardization within an organization	data management systems is consistently applied throughout the organization.	0
		data management systems is consistently applied throughout the multiple platforms.	5
6.	Transparency of calculations	data management systems with embedded in libraries and scripts	0
		data management systems with "black box" systems.	5

The complexity is calculated value based on a weighted factor tat addresses all three of these considerations. The formula to calculated the compelexity (C), is:

$C = (\text{Complexity factor for Annual total emission} \times 10\%) + (\text{Complexity factor for Publication of Emission Report} \times 10\%) + (\text{Complexity factor for LoA} \times 20\%) + (\text{Complexity factor for Type of GHG} \times 20\%) + (\text{Complexity factor for Data Management System} \times 20\%) + (\text{Complexity factor for number of sub category} \times 20\%)$ + (see table 2)

Table 2 The Complexity for Determination the Duration of Verification

Considerations	Weight	Range	Complexity Factor
Annual total Emission (Tonne)	10%	10-100	1,2
		100-1000	1,4
		1000-10.000	1,6
		10.000-100.000	1,8
		≥ 100.000	2
Publication of emission report	10%	Yes	1
		No.	0
LoA	20%	Limited	1

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
	Issued Date	24 January 2022
	Page	13 of 56
Procedure For The Verification Of GHG Statements		

Considerations	Weight	Range	Complexity Factor
		Reasonable	1,6
Type of GHG	20%	1-3	1,2
		4-6	1,6
Data Management System	20%	0-10	1,2
		11-20	1,4
		21-30	1,6
Number of Sub category	20%	1-7	1,4
		8-15	1,6
		16-22	1,8

Once the complexity valued has been calculated using the formula, the value is used to determine the level of complexity based on Table 3.

Table 3 Level of Complexity

Complexity value	Level of complexity
>1,35	High
1,15 – 1,35	Medium
< 1,15	Low

The minimum duration of verification is shown in Table 4.

Table 4 Minimum Duration of Verification Time

Number of GHG Sources	Complexity		
	Low	Medium	High
1-2	3	3,5	4
3-4	3,5	4	4,5
5-6	4	4,5	5
7-8	4,5	5	5,5
9-10	5	5,5	6

The verification duration shall be increased or decreased as necessary throughout the planning process. If there are any conflict between between the man days quoted and the man-days needed to deliver the engagement, based on the outcome of the strategic analysis and assessment of risks, the total mandays may change and informed to client.

The factor can be increased or decreased the duration of verification are the following below:

- Proposed level of assurance, materiality, criteria, objectives and scope;

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	14 of 56

- Complexity of organisation and its measurement/monitoring processes;
- Organisational environment including the structure of the organisation that develops and manages the GHG statement ;
- Identified GHG sources, sinks and reservoirs, and their monitoring for organisation verification;
- Processes that deliver the information and data in the GHG statement ;
- Organisational links and interaction between stakeholders, responsible parties, client and intended users (for definition refer to ISO 14064-3) and verification criteria requirements

6.5 Verification

6.5.1 Planning

A. Strategic Analysis

After the contract is approved, the client/RP shall submit the documents that is listed on the Questionnaire (Point G) such as:

- GHG Report
- Quantification Methodologies (including data selection and collection, selection or development of GHG quantification model),
- Calculation GHG emissions and its result
- A base-year review and recalculation procedures
- GHG Information management procedures
- Document retention and record keeping procedures
- Evidence the assessment of uncertainty associated with the quantification approaches and determines the uncertainty at the GHG inventory category level (including if its not possible or cost effective, please justify)
- GHG Data Flow
- Previous Verification Report (if any and applicable)

Based on its data, the verifier shall perform strategic analysis to understand the activities and complexity of the client/RP to determine the nature and extent of the verification activities. The aim of the strategic analysis to get a comprehensive picture of the company to be verified with respect to business operations, emission sources and data monitoring.

This is done by considering the following activities i.e

- Relevant sector information
- The nature of operations of the facilities

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	15 of 56

- c. The requirements of the criteria, including applicable regulatory and/or GHG programme requirements
- d. The intended user's materiality threshold, including the qualitative and quantitative components
- e. The likely accuracy and completeness of the GHG Statement
- f. The scope of the GHG Statement and related boundaries
- g. The time boundary for data
- h. Emissions SSRs and their contribution to the overall GHG Statement
- i. Changes in GHG emissions, removals and reservoir quantities from the prior reporting period (e.g. changing reservoir is a reservoir with a carbon stock that has changed during the considered time period)
- j. Appropriateness of quantification and reporting methods and any changes
- k. Sources of GHG Information
- l. Data management information system and controls
- m. Management oversight of the responsible party's reporting data and supporting processes
- n. The availability of evidence for the responsible party's GHG information and statement
- o. The result of previous verifications
- p. Allocation approach
- q. The type of GHGs (e.g. only CO₂ or also other gases)
- r. The applied monitoring methodology (e.g. direct measurement of GHGs or calculation of GHGs with indirect measurement of activity and calculation data)
- s. Other relevant information

The above organization's GHG information review includes:

1. Nature, scale, and complexity
2. Confidence level of information and GHG statement
3. Completeness of information and GHG statement
4. Eligibility to participate in the GHG program

Strategic Analysis will be done by Lead Verifier

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	16 of 56

The verification team shall review and compile the GHG information of the client/RP (see content of strategic analysis by using form FGHG-TNI-004). The result of strategic analysis to be used for risk assessment, verification plan and evidence gathering plan.

If the information above has not achieved a sufficient level of understanding to assess the scope and complexity of the verification, it will not be possible to perform a risk analysis, determine if a modification to the verification team is required or assess whether the contractually agreed time allocation for this specific verification engagement is indeed sufficient.

The Limited level of assurance verification do not require a detailed assessment for the design, existence and effectiveness of controls because of the underlying assumption that the controls are reliable.

The verifier shall perform a strategic analysis to understand the activities and complexity of the organization and to determine the nature and extent of the verification activities. The result of strategic analysis to be used for risk assessment (**FGHG-TNI-004**), verification plan and evidence gathering plan.

B. Risk Assessment

Risk Assessment is the assessment of 'sources & the magnitude' of potential 'errors, omissions and misrepresentations related to the verification activities'

In the Risk Assessment, verifier shall:

1. Perform a risk assessment of GHG Statement to identify the risk of a material misstatement or NC with the criteria. The risk assessment shall consider the results of the materiality assesment. The information required for risk assessment purpose is taken directly from the Strategic Analysis.
2. Assess the risk of misstatement and determine the nature and extent of evidence gathering activities.
3. Determine performance materiality¹ taking into account the intended user's quantitative materiality threshold.
4. Identify qualitative matters that maybe material.

In conducting the risk assessment, the verifier shall consider the result of the materiality assessment:

¹ The performance materiality is a value that is set lower than what might be material to the intended user(s) to identify misstatements that, when aggregated, mght be material

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
	Issued Date	24 January 2022
	Page	17 of 56
Procedure For The Verification Of GHG Statements		

Table 5 Result of Materiality Assessment

Quantitative Materiality	Qualitative Materiality
Misstatement	Control Issue (e.g Calibration or Measurement Instrument Maintenance)
Incomplete Inventories	Bad control of documented information
Misclassified GHG Emission	Difficult to get the needed information
Misapplication of Calculation	Incompliance of indirect regulation related with GHG SSR

Type of risk that identified by the verifier are:

1. Inherent Risk (IR)

Inherent risk is the risk that a statement may be misstated because of intrinsic challenges in the subject matter. Inherent risk is assessed as high, medium, or low, which may change with the industry sector, process complexity, number and type of sources and sinks, number of data streams, complexity of calculations, uncertainty in measurements, emissions inventory and the greenhouse gas source categories. Inherent risk is increased if there have been changes from the prior submission (e.g., ownership, merger or acquisition, facility equipment, methodology, turnover of key staff, etc.).

2. Control Risk (CR)

Control risk is the risk that a misstatement in the statement has occurred and has not been detected and corrected by the internal controls of the facility. It is assessed as high, medium, or low risk. Control risk is determined based on the design of the responsible party's data management system and the application of the data management system to develop the facility or financial statement.

Typically, the design of the controls reflects the inherent risks (e.g., the higher the inherent risk the more extensive the controls).

High control risk would mean controls were either not appropriately designed, not operating effectively, or both. Therefore, high control risk must be mitigated by adjusting the detection risk.

3. Detection Risk (DR)

Detection risk is the risk that the procedures that the third party assurance provider or verifier applies will not detect a misstatement in the statement (e.g., the misstatement occurred and was not identified and corrected). The third party assurance provider or verifier's assessment of the risk of misstatement (i.e., the third party assurance provider or verifier's combined assessments of inherent risk and control risk) will affect the nature, timing and extent of the procedures performed for a particular statement. Table 6 below is an example risk matrix used to rank risk types.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	18 of 56

Table 6 Relationship IR and CR

Inherent Risk (IR)	Control Risk (CR)			
		High	Medium	Low
High		Low	Low	Medium
Medium		Low	Medium	High
Low		Medium	High	High

Note:

- The detection risk has an **inverse relationship** to the inherent and control risks. If the inherent and control risks are high, Verification Body designs and performs procedures that result in a low detection risk so that the overall risk is low. In some situations, the inherent and control risk may be so high that it would be impractical or cost prohibitive to design and perform procedures to achieve the desired low level of verification risk. s.
- IR is Risk of misstatement present because of the inherent nature of the industry, environment, or business structure. **HIGH** if material misstatement "is likely" to enter the GHG information & control system
- CR is Risk of misstatement as a result of the internal control system. **HIGH** if material misstatement "is not likely" to detected by client's internal control system
- DR is Risk that the procedures the Verifiers uses DO NOT DETECT a Material misstatement. **HIGH** means Verifiers can afford "less effective testing" because **LOW** means Verifiers need "more effective testing" because **LOW** Probability of Detecting misstatements
- IR and CR are the risks taht the accounts may contain missatements or usually called Risk of Material Misstatement (RMM) and assessed by verifier
- DR is calculated or solved from the above IR and CR
- VR is Risk that Lead Verifier is willing to accept that they give the WRONG Opinion (Materiality) LOW or VERY LOW

Risk Attribute

For a limited level of assurance, the risk assessment is performed on the statement as a whole and is not as detailed as a reasonable level of assurance engagement. Limited level of assurance verifications do not require that the risks identified in the risk assessment be identified at the detailed level of:

- Occurence, completeness, accuracy, cut-off and classification for emissions and removals; or
- Existence, rights and obligations, completeness, and accuracy and allocation for storage

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
	Issued Date	24 January 2022
	Page	19 of 56
Procedure For The Verification Of GHG Statements		

The verifier shall categorize risks an inherent, control and detection risk.

The verifier should consider the reasons for the risks and obtain more persuasive evidence then the risk is higher.

For reasonable level of assurance, every risk shall be identified the attributes as below :

- a) For emission and removals : occurrence, completeness, accuracy, cut-off and classification
- b) For storage : existence, rights and obligations, completeness and accuracy and allocation

Table 7 Risk Attribute (IR, CR, DR)

Risk Attributes	Data Testing
Occurrence	emissions, production, accounting and reductions that have been recorded have occurred and pertain to the facility
Completeness	all emissions, production, accounting and reductions that should have been recorded have been recorded;
Accuracy	emissions, production, accounting, reductions, quantification and related information have been recorded and appropriately disclosed;
Cut-Off	Emission, production, accounting, reduction, quantification and related information have been recorded in the correct reporting period
Classification	emissions, production, accounting and reductions have been recorded in the appropriate category;

The 'risk of misstatement' can increase the risk, such as:

- Inadequate documented procedures or compliance with procedures for collecting data, quantifying emissions, and preparing GHG statements
- Lack of competence of staff who has task to collect the data, quantifying emissions, and preparing GHG statements
- Lack of management involvement in preparing GHG statements
- Failure to identify all material emissions & removals
- Inconsistency in preparing information from the previous period
- Misleading material presentation, such as highlighting data or trends
- Inconsistent application of quantification methods or reports between sites, divisions, or other segments of the GHG statement

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	20 of 56

- Error in unit conversion

The Risk Assessment shall consider the following:

- a) the likelihood of intentional misstatement in the GHG statement;
- b) the relative effect of emission sources on the overall GHG statement and materiality;
- c) the likelihood of emission of a potentially significant emission source;
- d) whether there are any significant emission that are outside the normal course of business for the responsible party or that otherwise appear to be unusual;
- e) the nature of operations specific to an organization, facility;
- f) the degree of complexity in determining the organizational boundary or product system boundary and whether related parties are involved;
- g) any changes from prior periods;
- h) the likelihood non-compliance with applicable laws and regulations that can have a direct effect on the content of the GHG statement;
- i) any significant economic or regulatory changes that might impact emissions and emission reporting;
- j) selection, quality, and sources of GHG data;
- k) the level of detail of the available documentation;
- l) nature and complexity of quantification of emission;
- m) the degree of subjectivity in the quantification of emission;
- n) any significant estimates and the data on which they are based;
- o) the characteristics of the data management information system and controls;
- p) the apparent effectiveness of the responsible party's control system in identifying and preventing errors or emissions;
- q) any controls used to monitor and report of GHG data;
- r) the experience, skills, and training of personnel.

Verifier may carry out risk assessment from the information source as below:

1. Initial site visit to obtain data and information for the preparation of Risk Assessment
2. High-level analytical procedures (if the site visit is not possible to be carried out) to determine other areas of risk. These high-level analytical procedures may include:
 - Ratio comparison
 - Benchmark appeal

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	21 of 56

- Tren analysis
- Etc.

If the verifier decides not to do the site visit, the verifier may perform high-level analytical procedures to determine other areas risk. These high level analytical procedures may include :

- Evaluation of changes in GHG emission intensity
- Evaluation of changes in GHG emissions, removals, and storage over time
- Evaluation of expected GHG emissions, removals and storage against reported emissions

High-level analytical procedures are performed at the statement level and can compare emissions to industry benchmarks.

The verifier shall perform risk assesment on-site under any of the following circumstances:

- Lack of initial data and information submitted by the RP
- Lack of knowledge of the RP business process by the verifier so that it cannot identify the risk attributes that are analyzed
- The condition of the site that has not been defined in the mind of the verifier
- An initial verification
- A subsequent verification for which the verifier does not have knowledge of the prior verification activities and results
- There are unexplained material changes in emissions, removals, and storage since the previous verified GHG statement;
- The addition of a size or facility of GHG SSRs that are material to the GHG statement;
- Material changes in scope or boundary of reporting;
- Significant changes in the data management involving the specific site or facility.

The verifier shall perform risk assesment off-site under any of the following circumstances :

- Most of the initial data and information submitted by the RP is complete,
- The RP's business processes have been understood by the verifier,
- And the condition of the area (site) has been defined in the auditor's mind.

Table 8 Detection Risk Result

Detection Risk Result	Predominantly EGA Technique	Testing Type
If DR High	Then verifier predominantly will use control testing method (Control based verification strategy).	<ol style="list-style-type: none"> Design testing and internal control implementation Effectivity test of

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	22 of 56

Detection Risk Result	Predominantly EGA Technique	Testing Type
	<p>Data testing is done to a lesser extent.</p> <p>A controls approach is used for data tied into the operating systems.</p> <p>Readings from a continuous emissions monitor (CEMs) are conducted at a high frequency that yields too much data</p>	internal control operation
If DR Low (and Medium)	<p>The verifier predominantly will use substantive testing method (Substantive verification strategy)</p> <p>Substantive approach is used for data that relies on spreadsheets and manual entries.</p> <p>In cases with small or limited number of data points, such as monthly invoices for a calendar year, substantive testing is generally a more efficient and accurate method.</p> <p>In cases where there is a high control risk and the verifier has little or no confidence in the design or the operation of controls, the verifier must use a substantive approach to assess the evidence.</p>	<p>1. Test of detail</p> <ul style="list-style-type: none"> - Vouching - Tracing <p>2. Analytical testing</p>

Use for Risk Assessment Information

The risk assessment is used in developing the verification plan (VP) and evidence-gathering plans (EGP). Any input into the risk assessment will be recorded.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	23 of 56

The risk assessment output may address how the verification is planned with respect to the following :

- a) GHG emissions SSRs
- b) Boundaries
- c) Data management details
- d) Management controls

For the performance and documentation of the risk assessment using form **FGHG-TNI-004**

C. Evidence- Gathering Activities

Evidence-gathering activities is an implementation of the Evidence-gathering Plan (EGP)

The verifier shall design evidence-gathering activities to :

- a) Collect sufficient and appropriate evidence which to base the conclusion
- b) Obtain more persuasive evidence the higher the risk of misstatement
- c) Consider inherent risk and detection risk in designing the evidence-gathering activities
- d) Design and perform analytical procedures and tests for each type of material emission or removal
- e) Develop evidence-gathering activities that determine whether the GHG Statement conforms to the criteria, taking into account the principles of the standards or GHG Programme that apply to the GHG Statement

The verifier may design evidence-gathering activities for the GHG systems and controls as indicated by the risk assessment.

Obtain more persuasive evidence while the risk of misstatement is higher and also the consideration of inherent risk and detection risk in designing the evidence-gathering activities is described in the Detection Risk Result table

The verifier shall design and perform analytical procedures and test for each type of material emission or removal, whereas those that are not material will not be subjected to further verification

Several types of analytics may be used to evaluate records and data to identify risk areas at the planning stage and/or to help the third party assurance provider or verifier to focus the majority of the verification to higher risk areas. This is commonly referred to as "risk-based approach". For verifiers, types of data or calculations analyzed typically include: emissions, fuel consumption, production, and energy consumption. For verifiers, possible areas for analysis including revenue and sales records and records for prices of products

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	24 of 56

sold to external and internal markets. Third party assurance providers or verifier should request additional data during the verification and perform analytics, to further enable the third party assurance provider or verifier to form a conclusion on the statement. Results from the analytical testing, including any identifying anomalies and discrepancies should be documented in the working papers or files. Analytics testing is just one of many tools the third party assurance provider or verifier can use to assess the data that was used by the responsible party for their statement.

In designing and performing analytical testing the verifier shall consider:

1. The ability of the analytical test to reduce or mitigate the risk identified
2. The reliability of the data to be analysed
3. The likelihood that the analytical testing will identify material misstatements

If analytical testing identified fluctuations or relationships that are inconsistent with other relevant information or that differ significantly from expectations, the verifier shall investigate such differences by obtaining additional evidence and performing other evidence-gathering activities.

Several types of Analytical testing used for this verification activity are:

1. Comparative Analytics
2. Contribution Analytics
3. Control and Substantive Testing
4. Estimates Testing

The explanation of the types of analytical testing are as follows:

1. Comparative Analytic

Comparative analytics typically includes comparing evidence to:

- Similar operating periods;
- Anticipated results;
- Similar industry information;
- Data and/or financial trending; and
- Other, similar operations.

Relationship analytics assumes there is a relationship between two independently measured variables (e.g., fuel consumption for a turbine and energy produced by the turbine, or steam-oil-ratios and stationary fuel combustion emissions for in-situ facilities). Relationship analytics typically includes:

- Correlations; and

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	25 of 56

- Efficiencies.

2. Contribution Analytics

Commonly used in verification audit and is used to compare a line item, emission source category, or individual sources or sink to the total. It is also used to assess the relative contribution of the line item to the overall statement. This analysis is usually done for both the line item, source or sink and for the greenhouse gas species reported in the statement.

For large emitters and opted-in facilities, the contribution analysis is conducted for the two parts of the compliance obligation calculation: the total regulated emissions (TRE) and allowable emissions (AE). For the TRE, a contribution analysis is conducted for the emissions from each of the emission source categories used in the direct emissions (DE) calculation. The emissions from these source categories are compared with the DE to determine the percent contribution of that source. A contribution analysis is also conducted for the imported CO₂, exported CO₂, and CO₂ consumed in urea production, where the percent contribution of each parameter is compared with the TRE. Similarly for the AE, a contribution analysis is conducted for the facility products, where the allocations of individual products (in tonnes CO₂e) is compared with the total product allocations to determine the percent contribution. Separately, a contribution analysis is conducted for the imported indirects where the tonnes CO₂e of the individual indirect is compared with the AE.

For aggregate facilities, the contribution analysis is relatively straight-forward as it would only include emissions and exported CO₂ from stationary fuel combustion

In designing analytical tests, the verifier shall identify an expectation of quantities and ratios but the expectation does not need to be sufficiently precise to identify potential material misstatements

If the results of the analytical tests are inconsistent with other information or the verifier's expectations, these result may be resolved through inquiry. The verifier may design additional evidence-gathering activities to support the results of the inquiry.

3. Control and Substantive Testing

Controls reliance tests the controls used to manage data used to generate the statement. Controls reliance can only be used in a relatively robust and mature data or financial management system, which is assessed by the third party assurance provider or verifier. The preliminary risk assessment in a controls reliance approach identifies the controls along the data trail, and develops tests to analyze the effectiveness of the controls. If the third party assurance provider or verifier is going to partially rely on controls, the third party assurance provider or verifier needs to test the operational effectiveness of the controls and the data that the control is processing. Data testing is done to a lesser extent in controls reliance verifications audits than it is in substantive testing procedures.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	26 of 56

In most cases, significant controls reliance is not appropriate or feasible for greenhouse gas verifications or financial auditing. As such, the department requires that the verification or audit plan and approach be designed so that much of the evidence required to support the verifier or verifier's conclusion comes from substantive procedures.

The department will not accept verifications based solely on controls reliance; Verifiers must assess underlying data to confirm it is being reported correctly and that responsible party's data management systems being used are performing as intended.

The verification audit procedures need to be tailored to the specific data streams, controls, and evidence available for the facility or financial statement. For example, a controls approach is used for data tied into the operating systems and a substantive approach is used for data that relies on spreadsheets and manual entries. In cases with small or limited number of data points, such as monthly invoices for a calendar year, substantive testing is generally a more efficient and accurate method.

Some controls reliance is appropriate in situations where there are extensive operational controls operating effectively, and where there is a large amount of data in which sampling alone and other substantive procedures are unlikely to yield sufficient and appropriate evidence to support the verifier's conclusion. For example, readings from a continuous emissions monitor (CEMs) are conducted at a high frequency that yields too much data to be tested using substantive testing methods (cannot be economically or efficiently sampled). A controls approach would be appropriate to assess this type of evidence.

In cases where there is a high control risk and the verifier has little or no confidence in the design or the operation of controls, the verifier must use a substantive approach to assess the evidence

The verifier shall design and implement evidence-gathering activities to test the operating effectiveness of controls. If deviations are detected, the verifier shall assess:

- whether the deviations affect the ability to rely on those controls,
- whether additional test of controls are necessary, and
- whether other types of evidence-gathering activities need to be applied.

if the characteristics of the data are such that only tests of control can be used, the verifier shall design and implement evidence-gathering activities to establish the operating effectiveness of those controls.

The verifier may design additional evidence-gathering activities to test controls as indicated by the risk assessment.

The example of control testing are:

- Inspection of documents for evidence of authorization

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	27 of 56

- Inspection of documents for detailed evidence including inspection by appropriate client personnel
- Observation of client personnel in carrying out various tasks, such as opening mail and carrying out stock counts
- Inquiry client personnel about how they are carrying out their duties
- Re-performing control procedures to test effectiveness
- Observation and Inquiry Procedures are used in the preliminary test

The example of Substantive Testing are:

- accuracy
 - Confirmation from the fuel supplier of the validity of the biofuel content value (BIO90)
 - Confirmation from the transportation vendor about the type and type of transport vehicle
- Cut-off

Inspection of documents to verify the date of transactions recorded at the end of the month and/or the end of the year
- Completeness

Inspect supplier invoices to verify amounts recorded as purchases
- Occurrence

Confirmation of the use of fuel and chemicals from the user unit

4. Estimates Testing

Third party assurance providers must test the emissions estimates and assess potential discrepancies. To do this they must develop appropriate test procedures and recalculate emissions estimates used by the responsible party to develop the statement.

Methods used to test estimates may include:

- Examining the completeness, accuracy and relevancy of the underlying data used in the estimate. If information is generated by the responsible party, the integrity of the information will need to be consistent with the system(s) used to generate the statement
- Examining the underlying assumptions for the estimate, compare the assumption to prior operating conditions (e.g., does the estimate apply to the operating conditions?), assess the appropriateness of the estimation model

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	28 of 56

(e.g., using a seasonal model vs. a prior period model), assess if all appropriate factors are included (e.g., fuel consumption or fuel consumption and load), etc.

- Testing the calculations and recalculating the emissions
- Where possible, comparing prior estimates to actual results
- Using independent estimates developed by the third party assurance provider to confirm the responsible party's estimates. If independent estimates are used, the third party assurance provider must ensure that the independent estimate is relevant and appropriate to assess the original estimate against program criteria; and
- Assessing the emissions estimates against the quantification methodologies prescribed by the department for certain sources and facilities.

Based on the assessment conducted, the third party assurance provider is required to determine what the risk is associated with any potential discrepancies identified (e.g., whether there is a high, medium, or low risk of a material misstatement). If the third party assurance provider determines that there is a high risk for a material error, the third party assurance provider must adjust the sampling plan to mitigate the risk (e.g. increase data sampling). If the third party assurance provider cannot mitigate these risks, the third party assurance provider should consider qualifying their opinion in the verification statement. Third party assurance providers are required to use their professional judgement in assessing both quantitative and qualitative findings.

If the risk assessment has determined the estimated approach to have material impact on the overall GHG statement, the verifier shall evaluate:

- a) the appropriateness of the estimate methodology;
- b) the applicability of the assumptions in the estimate;
- c) the quality of the data used in the estimate

The verifier shall develop evidence gathering activities that test the operating effectiveness of the controls governing the development of the estimate.

The verifier shall develop his/her own estimate or range to evaluate the responsible party's estimate

The verifier shall evaluate whether the estimates, if any, comply with the criteria and whether the methods for making estimates:

- Have been applied consistently from prior periods;
- Have been changed from prior period;
- Are appropriate

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	29 of 56

The verifier shall develop evidence-gathering activities that determine whether the GHG statement conforms to the criteria, taking into account the principles of the standards or GHG programme that apply to the GHG statement.

The verifier shall evaluate whether the estimates comply with the criteria. As indicated by the risk assessment, the verifier may design additional evidence-gathering activities that:

- a) Evaluate the appropriateness of the estimate methodology, the applicability of the assumptions in the estimate and the quality of the data used in the estimate
- b) Test the operating effectiveness of the controls governing the development of the estimate; or
- c) Develop his/her own estimate or range to evaluate the responsible party's estimate

Site and Facility Selection

Site visit shall be planned and performed as appropriate to gather information needed to reduce verification risk and to aid in the design of evidence-gathering activities.

Based on the risk assessment, the verifier shall identify the need to visit sites and facilities, including the number and location of individual locations to be visited, considering:

- a) the results of the risk assessment and efficiencies in collecting evidence;
- b) the number and size of sites and facilities associated with the organization;
- c) the diversity of activities at each site and facility contributing to the GHG statement;
- d) the nature and magnitude of the emission at different sites and facilities, and their contribution to the GHG statement;
- e) the complexity of quantifying emissions sources generated at each relevant site or facility;
- f) the degree of confidence in the GHG data management system;
- g) any risks identified through the risk assessment indicating the need to visit specific locations;
- h) the results of prior verifications, if any.

Site visit can be done in 3 ways, which are:

1. Onsite visit
2. Remote
3. Combination

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	30 of 56

The verifier shall perform a site or facility visit under any of the following circumstances:

- a) an initial verification;
- b) a subsequent verification for which the verifier does not have knowledge of the prior verification activities and results;
- c) a verification where there has been a change of ownership of a site or facility and where the emissions, removals, and storage of the site or facility are material to the GHG statement;
- d) when misstatements are identified during the verification that indicate a need to visit a site or facility;
- e) there are unexplained material changes in emissions, removals, and storage since the previous verified GHG statement;
- f) the addition of a size or facility of GHG SSRs that are material to the GHG statement;
- g) material changes in scope or boundary of reporting;
- h) significant changes in the data management involving the specific site or facility.

The verifier may determine that the circumstances specified in a) through h) above do not require a site or facility visit based on :

1. The result of the risk assessment and evidence-gathering plan
2. The result of any prior verification to the same site or facility

The verifier shall justify and document the rationale for the decision that a site or facility visit is not necessary.

If the verifier includes a site visit in the verification plan, the verifier shall perform activities at the site or facility to assess, as applicable:

- a) Operations and activities relevant to GHG SSRs
- b) Physical Infrastructure
- c) Processes and material flows that impact emissions
- d) Scope and boundaries
- e) Calculations and assumption made in determining the GHG data, emissions and, as applicable, emission reduction and removal enhancements

For Limited Level of Assurance , If the verifier include a site visit in the verification plan, the verifier shall perform activities at the site or facility to assess, as applicable:

- a. Operation dan activities relevant to GHG SSRs
- b. Physical infrastructure
- c. Processes and material flows that impact emissions
- d. Scope and boundaries

Calculation and assumptions made in determining the GHG data, emission and as applicable, emission reductions and removal enhancements.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	31 of 56

Content of the evidence gathering

Content of the evidence gathering activities that shall be designed related with :

a) Data Trail

The verifier shall design evidence-gathering activities to determine the existence of data trail for material emissions, removals and/or storage, the order of traced data sources are as follow:

- Emission Source Data
- Tools Data
- Facility Data
- GHG Statement

b) GHG Information system and controls

Evidence-gathering activities that assess the design and effectiveness of the GHG information system and controls shall consider:

- a) the selection and management of the GHG data and information
- b) processes for collecting, processing, consolidating, and reporting GHG data and information
- c) systems and processes that ensure the validity and accuracy of the GHG data and information
- d) the design and maintenance of the GHG information system
- e) systems, processes, and personnel that support the GHG information system, including activities for ensuring data quality
- f) Program maintenance & calibration for equipment used to monitor & measure GHG emissions/removal, including:
 - a. ensure the accuracy of the equipment to meet the required accuracy of reporting
 - b. any changes to the GHG program that can have a 'material effect' on GHG information and statements
- g) the results of previous verification, if available and appropriate

The verifier may design evidence-gathering activities for the GHG systems and controls as indicated by the risk assessment

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	32 of 56

c) GHG data and information

The verification team reviews the GHG information, taking into account:

- Completeness, consistency, accuracy, transparency, relevance, and (if appropriate) conservative nature of GHG information, including the origin of the raw data
- Suitability of 'methodology' of:
 - a) Estimation & quantification of selected GHG
 - b) Quantification of selected base year
- GHG information cross-check
- Uncertainty of GHG information arising from different data sources or GHG quantification methodologies

The results of the GHG data and information test that need to be considered include:

1. Completeness
2. Consistency
3. Accuracy
4. Transparency
5. Relevance
6. Conservative Nature (if applicable)
7. Raw Data
8. Conformity of Methodology:
 - a. selected GHG estimation & quantification
 - b. quantification of selected base year
9. Cross-checking GHG information
10. Uncertainty of GHG information arising from different data sources or GHG quantification methodologies
11. Accuracy & uncertainty of GHG information based on 'materiality' determined by the GHG Program
12. Other factors that may significantly influence GHG information

GHG Data and Information inspection is carried out on:

- a. Input Controlling

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	33 of 56

Checking data in the form of measurement / calculation result up to printed data

b. Transformation Controlling

Error checking during the process of compiling, transferring, processing, calculating, estimating, merging, sorting / adjusting input data in progress

c. Output Controlling

Environmental control around GHG information distribution & comparison between input and output

d) Data aggregation process

Evidence-gathering activities that relate to the data aggregation process are including:

- Reconciling the GHG statement with the underlying records, dan
- Examining material adjustments made during the course of preparing the GHG statement

The verifier shall obtain, through inquiry, an understanding of material changes made during the course of preparing the GHG statement. The verifier may design additional evidence-gathering activities to support the results of the inquiry.

The verifier shall obtain, through inquiry, an understanding of material changes made during the course of preparing the GHG statement.

The verifier may design additional evidence-gathering activities to support the results of the inquiry.

The verifier shall use 'one or more' of the following evidence gathering (EGA) activities and techniques:

Table 9 Correlation between type of technical test and evidence

EGA Activities and Techniques	Control Test	Substantive Test
1. Observation	V	
2. Inquiry	V	V
3. Analytical Testing		V
4. Confirmation		V
5. Recalculation		V
6. Examination		V

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
	Issued Date	24 January 2022
	Page	34 of 56
Procedure For The Verification Of GHG Statements		

7. Retracing		V
8. Control Testing	V	
9. Sampling		V
10. Estimate Testing		V
11. Tracing		V
12. Cross-Checking		V
13. Reconciliation		V

Note:

4. Confirmation: Look for written confirmation from third parties. Used when verifier cannot observe a physical condition. For example: calibration of flow rate measuring instruments

5. Recalculation: Calculation accuracy check. For example: recalculation of CO₂ CH₄ emission from flares, due to anomalous numbers

9. Sampling: In limited level of assurance verifications, since the risk identification is at the level of the GHG statement as a whole, the sampling is conducted at a higher or in a more aggregate form. The verifier shall design sampling appropriate to the verification risk.

10. Estimate Testing: generally used for validation activities, but under certain conditions estimate testing activities are used for verification activities, namely GHG quantification in variety of situations. For example, the amount of fuel used by a delivery van may not be known, but the distance travelled by van can be estimated. Assumption made by the fuel efficiency of the van and the distance travelled can be used to estimate GHG emissions.

11. Tracing: Reviewing the original data records to ensure that all data have been reported correctly / properly. For example: continuous monitoring of GHG emissions/removal from many sources

The verifier perform evidence-gathering activities at the site or facility to assess, as determined by the risk assessment :

- Operations and activities to GHG SSRs
- Data management and control systems
- Physical infrastructure
- Equipment, such as a measuring devices and instruments, to establish traceability to applicable calibration and monitoring information
- Types of equipment and supporting assumptions and calculations (e.g. Verifying that manufacturer information used as a basis for emission calculations matches installed equipment)
- Processes and material flows that impact emissions

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	35 of 56

- g) Scope and boundaries
- h) Conformity with operational and data collection procedures
- i) Personnel activities that have a potential to impact materiality
- j) Sampling equipment and sampling methodologies
- k) Monitoring practices against the requirements established by the responsible party or specified in criteria
- l) Calculations and assumptions made in determining the GHG data, emission and, as applicable, emission reduction and removal enhancements
- m) Quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters

The evidence-gathering activities is documented by form **FGHG-TNI-006**.

Visit sites and facilities may be performed based on the result of **FGHG-TNI-004** to gather information needed to reduce verification risk and to aid the design of evidence-gathering activities. If verifier determines that a site or facility visit is not necessary, the verifier will justify and document the rationale for the decision.

D. Evidence-Gathering Plan

Operational explanation/guideline on how to approach in designing and developing an evidence gathering plan (EGP/SP), which details the EGA according to the characteristics of GHG data/information, including:

1) sample selection

- Target Population: The population to be studied/ to which the verifier wants to generalize the results
- Sampling Unit (Metric): smallest unit from which sample can be selected

2) sampling frame and criteria

- List of all the sampling units from which sample is drawn
- Sampling Scheme: Method of selecting sampling units from sampling frame

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	36 of 56

3) sampling (number) size

The percentage of sample size is determined by considering Time and Cost and also based on the detection risk. The higher the risk, the larger the sample to be taken and vice versa.

4) sampling methods

The sampling methodology is not specifically determined depending on the size and nature of the population, the methods used include:

1. Probabilistic Sampling:

- a. Systematic Sampling
- b. Random Sampling
- c. Stratified Sampling

2 Judgmental Sampling

- Different from exclusively probabilistic sampling
- E.g statistical sampling but only within a pre-defined sub-population (e.g stockpile where only certain parts are accesible)

Evidence-gathering plan is based on the results of the verifier's risk assessment. It shall be designed to lower the verification risk to an acceptable level. The evidence-gathering plan shall specify the type and extent of evidence-gathering activities. If the risk assessment result states the detection risk (DR) is high and the flow process of GHG data and information acquisition (from the top management level to the operator or administrator data level) is high, then the evidence-gathering plan is made by taking a larger number of samples, and vice versa.

In reasonable level of assurance verification, the evidence-gathering plan is continually updated until sufficient and appropriate evidence is gathered to allow the verifier to reach a conclusion. In limited level of assurance verifications, the verifier updates the evidence-gathering plan primarily for potentially material misstatements.

E. Verification Plan

The verification plan (**FGHG-TNI-005**) describes verification activities and schedules. The output from the strategic analysis above used as an input to the assessment of risks, evidence gathering plan and verification plan.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	37 of 56

The verification plan must be developed or released by the Lead Verifier and communicate to the client and responsible party also ensure that relevant client and responsible party's personnel are notified prior to the beginning of any site visit

In approving the verification plan, team leader ensure :

- a) it is complete and that all sub-elements of the plan provide for a complete integrated verification process consistent with the agreed criteria, scope, objectives, level of assurance and materiality of the engagement.
- b) the verification duration, team competencies and team member assignments are adequate and fit the needs of the verification.
- c) that there is consistency between the verification plan and the contractually agreed objectives, scope, criteria, level of assurance and materiality
- d) verification documentation clearly identify any approved variations to the agreement

The level of risk mitigation provided by the GHG information systems and controls shall impact the detail and level of verification sampling.

In the limited level of assurance, the facility or site that conducts the aggregation for the GHG statement shall be visited, unless the verifier has prior knowledge of the facility or site's aggregation process/ other facility or site visits shall be determined based on the risk assessment and designed evidence-gathering activities.

Based on the result of risk assessment its laid down on the evidence-gathering plan **(FGHG-TNI-007)**. It shall be designed to lower the verification risk to an acceptable level. The evidence-gathering plan specify the type and extent of evidence-gathering activities. **The evidence-gathering plan should not to be communicated to the client or responsible party.**

The verification plan and evidence-gathering plan are approved by the Team Leader. If there are amendments its shall be approved by Team Leader in the following circumstances:

- a) Change in scope or timing of verification activities
- b) Change in evidence-gathering procedures
- c) Change in locations and sources of information for evidence-gathering
- d) The identification during the verification process of new risks or concerns that could lead to material misstatements or nonconformities

6.5.2 The Execution of Verification

The Execution of Verification can be done with the 3 methods such as:

1. Onsite visit
2. Remote

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	38 of 56

3. Combination of both methods

Verification is conducted based on the evidence gathering activities (6.5.1C) and evidence gathering plan (6.5.1D).

In order that all necessary documents can be checked and the verifier receive an impression of the company, which helps among other things to discover emission sources that have not been taken into consideration or to be able to better assess doubtful statements.

Within the framework of the verification, the data used for the calculations must be checked using available documents. In so far as possible, clear documents such as invoices from third-party suppliers (e.g. for electricity and gas) should be used as a basis for the examination. Possible evidences for individual areas are named in the following paragraphs.

- Energy consumption (electricity, gas) – invoices from the energy suppliers; the current meter readings should be used for approximate comparison with the values stated on the invoice, and the correct number of meters should be read.
- Business trips – Questionnaires for employees, travel logs (for company organisations), excepts from the computer-supported travel cost management system; a random sample of employees should be asked about their business travel in order to check the accuracy of employee questionnaires, for example.
- Company cars – travel logs, fuel invoices
- Commuter behaviour – Employee questionnaire; some employees selected on a random sample basis should be asked about their commuter behaviour, in order to check the accuracy of employee questionnaires.
- Material consumption – Purchasing documents and receipts
- Waste and waste water volumes – Waste register, invoices of waste disposal firms, water bill/invoice

If needed, Verification Team have access to relevant internal or external expertise for advice on specific matters relating to verification activities, sectors or areas within the scope of their work. The verification conduct with an attitude of professional scepticism, which assumes that the presented information and data may be wrong until proven differently, and take account of relevant stakeholder or market concerns and the applicable verification criteria and associated principles.

The verification body review any changes to GHG or organization structure, GHG plan or GHG inventory since the last verification. For GHG verification the verification body additionally consider:

- Outstanding issues from the verification report;
- The status of the implementation of the verification; and

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	39 of 56

- c) Reliability of the external information and data used to justify the GHG emission determination.

Verification of a GHG statement includes, in addition to verification of an organisation GHG statement

- Review of the verification report;
- Verification of any changes to the GHG plan including:
 - The identified GHG sources, sinks and reservoirs;
 - Selection and quantification of GHG sources, sinks and reservoirs; and
 - Monitoring of the GHG verification.
- Verification of any changes to the justification for “selection or establishment of the criteria and procedures” and its implementation
- verification of any changes to the organisational links and interactions between stakeholders, responsible party (verification proponent in some GHG program), client, and intended users.

In cases where errors, omissions or misstatements are identified in the GHG data and information, the verification team shall require that these are corrected by the client, and increase the sampling. In general, two types of issues might appear in the process of verification: misstatements (material or non material) and non-conformities.

Identified misstatements and non conformities are summarised in a list of findings.

Any mistakes or inconsistencies that are identified are recorded in a Nonconformity Report **(FGHG-TNI-015)**. If the misstatements are so serious that verification appears impossible, the verification process is broken off at this point.

Typical errors which occur in the calculation or documentation of the GHG (this list is not exhaustive) include, for example:

- Emission factors are inappropriate, obsolete or not conservative
- Incorrect calculation formulae were used
- Typing errors and figures written “the wrong way round” within the calculation
- No or uncertain or non-traceable sources stated for emission factors
- Incorrect distances used in the calculation of business travel
- Significant emission sources were not taken into consideration
- The methods for calculating the carbon footprint are insufficiently documented
- The activity data used do not agree with the evidences examined during the verification
- Evidences could not be supplied
- Requirements of the standard used as a basis or of the greenhouse gas programme are not fulfilled

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	40 of 56

The list of findings is sent to the client at the latest two working days after the verification activities. The client must correct the defects stated in the list of findings. The client is informed of the maximum time allowed, which is 40 days. The corrections and corrective actions are then examined for their completeness and correctness and the results are also noted in the list of findings. If further corrections are needed following this examination, these must be corrected by the client as rapidly as possible. The final list of findings is a component part of the verification report.

The following goals should basically be taken into consideration during the review:

- Discussion of the corrective actions identified during the document review,
- Technical examination of the measuring equipment used for monitoring (e.g. reading off of water meters)
- Review of documents stored on site which serve as proofs for calculation of the emission
- Review of the information system regarding greenhouse gases and monitoring and control of the gases (selection of data, document control)
- Monitoring of the work processes to ensure that all greenhouse gas emission sources have been taken into consideration.

Further aims must be specified in the verification plan.

Within the framework of the main verification (documentation review and verification activities), it must be checked and evaluated if all the verification criteria have been adhered to. This relates to the standards used and also to requirements of greenhouse gas programmes and/or interested parties.

During the on-site verification, the Attendance List (FMLF-TNI-007C) and the Declaration of Obligation (FGHG-TNI-015) must be used. Furthermore, handwritten notes (FMLF-TNI-005) have to be made to document the verification process. The verification Checklist (FGHG-TNI-016) may also be used as a guidance document.

6.5.3 Completion

A. Evaluation of the GHG statement

Depending on the result of the verification steps that are carried out (preliminary of verification documents, on-site verification that have been carried out), the verification team will review the GHG statement as input into the assessment of the GHG statement

1. Evaluation of Changes

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	41 of 56

The verifier evaluates any changes in risks and materiality threshold that may have occurred over the course of the verification. The verifier shall evaluate whether any high-level analytical procedures applied remain representative and appropriate

2. Evaluation of sufficiency and appropriate of evidence

The verifier determines whether the evidence collected is sufficient and appropriate to reach a conclusion. If the verifier determines there is insufficient or inappropriate evidence, the verifier shall develop additional evidence-gathering activities.

3. Evaluation of Material misstatements

The verifier evaluates and document material misstatements. Misstatement is errors, omissions, misreporting or misrepresentation in GHG Statement. Material Misstatement is individual misstatement or the aggregate of actual misstatement in GHG statement that could be affect the decision of intended users.

In evaluating the risk of material discrepancies related to the GHG statement, the verification consider:

- b) Views of the intended user;
- c) Relevance and relative contribution of the various GHG emissions from all GHG sources, sinks and reservoirs;
- d) Adequacy of the GHG information system and controls;
- e) Complexity of organisation or GHG verification operations;
- f) Monitoring process applicable to the GHG organisation; and
- g) Relevant evidence from previous verifications, as applicable.

Non-Material Misstatement is a statement error outside the material misstatement. Non-material misstatement errors can be in the form of:

- Limited to the certain elements, classification, or line items of the GHG statement
- If restricted, does not represent a substantial part of the GHG statement
- Not fundamental to the intended user's understanding of the GHG statement

4. Evaluation of conformity with criteria

The verifier evaluates any non-conformity with the criteria. Non-conformity is a non-fulfillment of requirement, that is caused by inappropriate GHG information system and control, competence, and infrastructure.

Material Non-Conformity is a non-conformity caused by things that directly affect the GHG calculation, for example there are emission sources that are not identified and taken into account in the GHG calculation, both direct and indirect emissions. The material Non-

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	42 of 56

Conformity occurs if the GHG value as a result of verification is greater than the agreed materiality threshold level.

While Non-Conformity is non-conformity caused by factors that do not directly affect the calculation of GHG.

5. Evaluation of changes from prior periods

The verifier shall determine whether any changes from prior periods that make the periods incomparable have been disclosed appropriately by the responsible party.

B. Conclusion and draft opinion

The verifier reach conclusion based on the evidence gathered and the output of the GHG statement shall confirm that:

- Evidence gathered is sufficient to verify the GHG statement in line with the scope, criteria, objectives, materiality and level of assurance as agreed in the contract
- The verification process, as carried out, has delivered the level of assurance as agreed
- Sampling and its results support, or not, a conclusion that there are no material discrepancies in the GHG statement
- The GHG statement is free from material discrepancy based on the evidence and findings from the verification process and the agreed scope, objective, criteria, materiality and level of assurance. The correlation between misstatement and opinion is described on the Table 11.

If the evidence and findings are not sufficient to reach this conclusion then; either:

- The level of assurance and / or materiality of the engagement shall be amended; OR
- One of the types of opinion may be formed (see table 10)

Table 10 Type of Opinion

No.	Type of Opinion	Definition
1.	Unmodified opinion	In order to draft an unmodified opinion, the verifier shall ensure that: a. there is sufficient and appropriate evidence to support

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	43 of 56

No.	Type of Opinion	Definition
		<p>material emissions, removals, or storage</p> <p>b. the criteria are applied appropriately for material emissions, removals, or storage</p> <p>c. the effectiveness of controls has been evaluated when the verifier intends to rely on those controls</p>
2.	Modified opinion	<p>In order to draft a modified opinion, the verifier shall ensure that there is no material misstatement at the level of the GHG statement</p> <p>When there is a departure from the requirements of the criteria or a scope limitation, the verifier shall decide what type of modification to the verification opinion is appropriate. In addition to materiality, the verifier shall consider:</p> <ul style="list-style-type: none"> - The degree of which the matter impairs the usefulness of the GHG statement - The extent to which the effects of the matter on the GHG statement can be determined - Whether the GHG statement is, or could be understood to be, misleading even when read in conjunction with the verifier's opinion <p>A modified verification opinion, when read in conjunction with the GHG statement, normally will serve adequately to inform the intended user(s):</p> <ul style="list-style-type: none"> a) Confined to specific elements, classifications, or line items of the GHG statement b) Even if confined, not representative of a substantial portion of the GHG statement c) Not fundamental to the intended user's understanding of the GHG statement
3.	Adverse opinion	In order to draft an adverse opinion, the verifier shall conclude

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	44 of 56

No.	Type of Opinion	Definition
		<p>that:</p> <p>a) There is insufficient or inappropriate evidence to support an unmodified or modified opinion, or</p> <p>b) Criteria are not appropriately applied for material emissions, removals or storage; or</p> <p>c) The effectiveness of controls cannot be determined when the verifier intends to rely on those controls</p> <p>If the responsible party does not correct any material misstatement or nonconformity in an agreed period of time, the verifier shall take this into consideration when reaching the conclusion.</p>
4.	Disclaiming the issuance of an opinion	In order to disclaim the issuance of an opinion, the verifier shall ensure that he/she has been unable to obtain sufficient appropriate evidence and can conclude that the possible effects on the GHG statement of undetected material misstatement(s) are material and pervasive

Table 11 Correlation between Type of Misstatement and Type of Opinion

Type of Misstatement	Extent of Misstatement	Opinion Type
There is no misstatement	None	Unmodified
The misstatement is not material	Not Pervasive	Unmodified/Modified
The misstatement is material	Not Pervasive	Modified
	Pervasive	Adverse
There is a misstatement, but the type is unknown	Not Pervasive	Modified
	Pervasive	Disclaimed

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	45 of 56

For a modified opinion, the opinion shall contain a description of the reason for the modification and place this description before the verifier's conclusion. The verifier shall state the reasons for an adverse opinion. When the issuance of an opinion is disclaimed, the verifier shall state the reasons for the decision. Where the GHG statement includes a forecast of future emission reductions/removals, the GHG opinion shall explain that actual result may differ from the forecast as the estimate is based on assumptions that may change in the future

6.5.4 Verification Report

The verifier drafts a verification report. A verification report includes as a minimum:

- An appropriate title;
- An addressee;
- A statement that the responsible party is responsible for the preparation and fair presentation of the GHG statement in accordance with the criteria;
- A statement that the verifier is responsible for expressing an opinion on the GHG statement based on the verification;
- A description of the verification evidence-gathering procedures used to assess the GHG statement;
- The verification opinion;
- The date of the report;
- The verifier's location;
- The verifier's signature;
- A summary of the GHG statement;
- Reference to the verification criteria;
- Verification scope.

Following the end of the assessment procedure (documentation review and on site verification), verification report (**FGHG-TNI-008**) is written, which summarises the results of the verification. Content of the verification report according to ISO 14064-3 (Clause 6.3.3). The Lead verifier is responsible for drafting of the verification report and therefore for the assessment of the findings based on the results of the assessment.

Draft verification report and opinion are made by the Lead Verifier after the verification process is completed where there is a possibility of material misstatement and/or non-conformity issued to the client. The material misstatement and/or non-conformity must be resolved within 40 days (according to the Corrective Action point above).

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	46 of 56

The finished report and opinion is issued after the Material misstatement and/or material non-conformity is corrected by the client and its conformity is verified by the Lead Verifier. This finished report includes the conclusion and final opinion from the Lead Verifier.

The review is carried out by the independent reviewer to seek approval and independent verification of conformity. After this process is approved, then this final report is sent in hardcopy (with signature) or digital form (with digital signature or in the form of a signed scan) as a PDF document and the number of reports required by the client are sent to the client in printed form.

6.5.5 Independent Review

The verification body shall use an independent reviewer not involved in the verification activities to assess the internal verification documentation and the Verification Report.

After having completed the verification process, the release procedure has to be carried out by the independent reviewer who is selected that is competent personnel and different from the persons who's conducted the verification. The independent reviewer can be accompanied by technical expert to cover the scope and sector competencies. The independent review may be conducted during the verification process to allow significant issues identified by independent reviewer to be resolved before the opinion is issued.

The independent review shall:

- a. confirm that all verification activities have been completed,
- b. sufficiency and appropriateness of evidence to support the decision;
- c. whether significant findings have been identified, resolved, and documented.
- d. conclude whether or not the GHG Opinion is free from material discrepancy, and whether the verification activities provide the level of assurance agreed to at the beginning of the verification process in conformity with ISO 14064-3.

The independent reviewer shall evaluate verification process and documented its result using form **Release Protocol-FGHG-TNI-010**. The independent reviewer shall communicate with the verification team when the need for clarification arises. when identifies any mistakes with respect to the documents or inconsistencies regarding the suggested statement, those have to be clarified with the verification team leader. Changed documents have to be replaced in the workflow. The verification team shall address concerns raised by the independent reviewer.

6.5.6 Issuance Opinion

Based on the process and procedures conducted, there is no evidence that the GHG statement:

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	47 of 56

- Is not materiality correct and is not fair representation of GHG data and information
- Has not been prepared in accordance with related International Standards on GHG quantification, monitoring and reporting, or to relevant national standards or practices

The verification opinion shall:

- Conform with ISO 14064-3, Clause 6.3.2, except in cases where regulated requirements overrule this
- Be consistent with the outcome of the Verification review; and
- Contain a verification opinion and conclusion that reflects material discrepancies that remain after the conclusion of the verification, and be issued to the responsible party.

A verification opinion related to a GHG statement that does not include quantified GHG emissions data related to an organisation shall only be issued if:

- There is a legal agreement between the Verification Body and the client that any new GHG report or GHG statement released by the client subsequent to the initial verification statement is verified;
- For an organisation, a (internal) GHG verification report conforming to ISO 14064-1, Clause 9.3, is part of the scope of the verification;
- ISO 14064-1 is part of the verification criteria and the requirements are not reduced; and
- The verification statement is clear about what has been verified and does not use language associated with management system certificates or conformity statements.

The verification body make the decision on whether or not to confirm the claim according to the programme requirements. If the result of Independent Review is issuing a verification statement, Head of CB or Operation Manager SCS will be approve the **release of protocol FGHG-TNI-010**. But If the result of Independent Review is not issuing a verification statement, PT TÜV NORD Indonesia shall inform the client of its result.

After reaching a decision to issue opinion, the verifier issue an opinion (unmodified, modified or adverse) also the certificate and will be sent to the client. The certificate will be issued with the sign of Board of Director / VP.

There is no valid certificate for this verification, but to be shown is the reporting period based on the GHG quantification (not GHG report). In individual cases, deviating validity dates can be agreed upon with the client, as long as this is deemed reasonable based on the conducted verification.

The Verification Body cannot apply the level of assurance for non-regulated markets.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	48 of 56

6.6 Special Verification

In cases where it is necessary to conduct special verification at short notice, a verification of a previously verified GHG Statement in response to complaints or facts discovered after the verification, as the verification body :

- shall notify, in advance, the client, the responsible party, or both, of the conditions under which the special verification is to be conducted, and
- shall use additional care in assigning verification team members if there is a lack of opportunity for the responsible party to object.

6.6.1 Fact Discovered After the Verification

The verifier obtain sufficient appropriate evidence and identify relevant information up to date of the verification opinion. If fact or new information that could materially affect the verification opinion are discovered after this date, the verifier shall take appropriate action, including communicating the matter as soon as practicable to the responsible party, the client and the GHG Programme.

The verifier may also communicate to other interested parties the fact that reliance of the original opinion may now be compromised given the discovered facts or new information.

In so far as facts are discovered by the client, the responsible party or a greenhouse gas programme, which could have a major influence on the verification statement, the following actions have to be carried out.

- The verification Team responsible for carrying out the verification must investigate the newly-discovered facts in order to establish if they are suitably presented in the verification statement / the statement regarding greenhouse gases, and whether this results in the need to modify the verification statement.
- If the verifier come to the conclusion that it is necessary to modify the verification statement, further steps are instigated. The verifier Team Leader decides with regard to the necessary actions, which can consist of a new document review, an additional verification on site and/or modification of the report including the verification statement.
- Both the actions to be carried out and also the reasons for them and the possible consequences must be discussed with the affected parties (client, responsible party, if appropriate greenhouse gas programme).
- The actions instigated correspond to the method(s) described in this documented procedure with regard to the individual steps (e.g. document review, verification , drafting of report). If modifications to the verification statement have to be undertaken, these modifications and the reasons for them have to be documented.

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	49 of 56

6.6.2 Complaint

If an special verification becomes necessary because of a complaint by anyone involved in the verification, the procedure as described in point 6.6.1 has to be followed. The following special features have to be taken into consideration:

1. The Head of CB decides if there is a conflict of interest or incorrect behaviour of the verification team in connection with the complaint. In this, s/he takes the independence and the competence of the verifier into consideration.
2. If it emerges during the examination of the complaint that no conflict of interest or incorrect behaviour has occurred, the steps described in Clause 6.6.1 are followed.
3. If the examination of the complaint results in the conclusion that there is a conflict of interest or incorrect behaviour on the part of a verifier, a new team has to be put together for the further processing. In contrast to the standard procedure, this team cannot be rejected by the client or the responsible party. Therefore particular care must be taken when putting together the team. If a possible conflict of interest affects the entire TÜV NORD Indonesia organisation, it may be necessary to withdraw the certificate/report. In such a case, the legal department must be involved without fail.
4. If there has clearly been incorrect behaviour on the part of verifier, the person named in Point 1 decides regarding possible measures in order to ensure that this incorrect behaviour can be avoided in future. If this incorrect behaviour is deliberate or due to gross negligence, this person informs the direct superior of the verifier in question. This direct superior decides if disciplinary measures should be applied, and if so, which.

6.7 Communication and Record

6.7.1 Information provided to a client or responsible party

The verification body shall provide the following to its client or responsible party:

- a) A detailed description of the verification process, includes how the verification body considers results of previous verification result, where appropriate and if available
- b) Changes to the verification requirement and the relevant GHG programme that may affect the objectives of the client
- c) A schedule of verification activities and tasks
- d) Relevant information on verification team members
- e) Information about verification fees
- f) Its policy governing any statement that the client is authorized to use making reference to its verification
- g) Information on procedures for handling complaints and appeals

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	50 of 56

Those information can be obtained through website PT TÜV NORD Indonesia, brochure or direct communication between PT TÜV NORD Indonesia and client.

6.7.2 Communication of responsibilities to a client or responsible party

The verification body shall inform the prospective client or responsible party of its responsibility:

- a) To comply with verification requirements
- b) To make all necessary arrangements for the conduct of verification, including provisions for examining documentation and access to all relevant processes, areas, records, and personnel, and
- c) To make provisions, if applicable, to accommodate observers

6.7.3 Record

PT TÜV NORD Indonesia as the verification body maintain and manage records of its verification activities securely and confidentially, including during their transport, transmission, or transfer.

PT TÜV NORD Indonesia maintain and manage records of its verification activities for 10 years of shelf life including :

- a. Information submitted during pre-engagement and scope of verification
- b. justification for how verification time is determined,
- c. any revision to the verification planning activities
- d. demonstration that the verification activities have been carried out in accordance with the requirements of this document and the verification programme including findings and information on material or non-material misstatements;
- e. evaluation, selection and monitoring of performance of bodies providing outsourced activities;
- f. evidence to support conclusions and the decisions;
- g. verification statements;
- h. complaints and appeals, and any subsequent correction or corrective actions.

7. Applicable Documents

- 7.1 FMLF-TNI-074 Annex 1F.1 Contract for The Verification of GHG
- 7.2 FGHG-TNI-020, Questionnaire of Verification
- 7.3 FGHG-TNI-004 Strategic Analysis and Risk Assessment
- 7.4 FGHG-TNI-005 Verification Plan
- 7.5 FGHG-TNI-006 Evidence Gathering Activities

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 January 2022
	Page	51 of 56

- 7.6 FGHG-TNI-007 Evidence Gathering Plan
- 7.7 FGHG-TNI-008 Verification Report
- 7.8 FGHG-TNI-009 Clarification and Communication Form
- 7.9 FGHG-TNI-010 Release Protocol
- 7.10 FGHG-TNI-014 Finding Report
- 7.11 FGHG-TNI-015 Declaration of Independence
- 7.12 FGHG-TNI-018 rev 00 Verification and Accreditation Mark
- 7.13 FGHG-TNI-019 rev 00 Quotation form
- 7.14 FGHG-TNI-021, Special Verification
- 7.15 FGHG-TNI-022, Monitoring Schedule Verifier
- 7.16 Annex 1 - Difference Limited Level of Assurance dan Reasonable Level of Assurance



PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 Januari 2022
	Page	52 of 56

Annex 1 – Difference Limited Level of Assurance dan Reasonable Level of Assurance

No.	Process	Limited Level of Assurance	Reasonable Level of Assurance
1.	General	The limited level of assurance verification follows the same general process as the reasonable level of assurance verification	
2.	Strategic Analysis	Do not require a detailed assessment of the design, existence and effectiveness of controls because of the underlying assumption that the controls are reliable	Higher of two levels of assurance. Require a detailed assessment of the design, existence and effectiveness of controls
3.	Risk Assessment	<p>For a limited level of assurance, the risk assessment is performed on the statement as a whole and is not as detailed as a reasonable level of assurance engagement. Limited level of assurance verifications do not require that the risks identified in the risk assessment be identified at the detailed level of:</p> <p>a) Occurrence, completeness, accuracy, cut-off and classification for emissions and removals; or b) Existence, rights and obligations, completeness, and accuracy and allocation for storage</p> <p>The verifier shall categorize risks an inherent, control and detection risk. The verifier should consider the reasons for the risks and obtain more persuasive evidence then the risk is higher</p>	<p>The verifier identifies and assesses risks of material misstatement for the GHG statement as a whole and as well for occurrence, completeness, accuracy, cut-off and classification of material types of emissions and removals. The risks of a misstatement as a whole risks that are not identifiable with a specific emission or removal, but result from circumstance that increase the risk more generally.</p> <p>In engagements performed at the reasonable level of assurance, types of emissions should be reported by category in accordance with criteria. Each type of emission or removal refers to the kind of emission or removal and the data control system that controls that data because in the risk assessment the verifier assesses</p>

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 Januari 2022
	Page	53 of 56

No.	Process	Limited Level of Assurance	Reasonable Level of Assurance
			both the inherent and control risk. For example, stationary combustion emissions may not be a sufficient division of type because the operational stationary combustion devices may have a different data management system than the back-up stationary combustion devices or fuels may have fluctuating emission factors.
4.	Evidence Gathering Activities	<p>The verifier establishes the initial evidence-gathering plan and resolves any matters that come to his or her attention by either concluding that the matter is or is not material to the GHG statement. Although there is some iteration, it is usually significantly less than in engagements performed at the reasonable level of assurance</p> <p>The verifier shall design evidence-gathering activities that address all items in the GHG statement and focus on areas where material misstatements are likely to arise. If the verifier becomes aware of potential material misstatements, the verifier shall design appropriate evidence-gathering activities to be able to reach a conclusion about those potential material misstatements. Limited level of assurance verifications consist primarily of inquiry and analytical procedures to obtain sufficient and appropriate evidence</p>	The verifier should design sufficient and appropriate evidence-gathering activities to lower the verification risk to an acceptable level. The evidence gathering plan should be iterated continually until this state is complete

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 Januari 2022
	Page	54 of 56

No.	Process	Limited Level of Assurance	Reasonable Level of Assurance
5.	Data agregation process	The verifier shall obtain through inquiry an understanding of material changes made during the course of preparing the GHG Statement. The verifier may design additional evidence-gathering activities to support the results of the inquiry, depending on the response, may provide sufficient evidence taht any material adjustments were appropriate	The verifier should include evidence gathering activities that relate to the agregation process, including examining material adjustments made during the course of preparing the GHG statement.
6.	Analytical testing	<p>In designing analytical tests, the verifier shall identify an expectation of quantities and ratios but this expectation does not need to be sufficiently precise to identify potential material misstatements.</p> <p>If the results of the analytical test are inconsistent with other information or ther verifier's expectations, these results may be resolved through inquiry. The verifier may design additional evidence gathering activities to support the result of the inquiry.</p> <p>Instead, inquiry, depending on the responses, may provide sufficient follow-up evidence.</p>	When designing and performing analytical procedures for use in a reasonable level of assurance engagement, the verifier should determine the likelihood the analytical procedures will identify material misstatements. In order to dos o, the designed procedures shall be of sufficient precision to detect material misstatements. If analytical procedures identify fluctuations or relationship that are inconsistent with other relevant information or that differ significantly from expectations, ther verifier should investigate such differences by obataining additional evidence and performing other evidence gathering activities.
7.	Control testing	The verifier may design additional evidence gathering activities to test controls as indicated by the risk assessment	The verifier shall design additional evidence gathering activities to test controls as indicated by the risk assessment

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 Januari 2022
	Page	55 of 56

No.	Process	Limited Level of Assurance	Reasonable Level of Assurance
8.	Sampling	In limited level of assurance verifications, since the risk identification is at the level of the GHG Statement as a whole, the sampling is conducted at a higher or in a more aggregate form. The verifier shall design sampling appropriate to the verification risk	same
9.	Estimate testing	In engagement performed at the limited level of assurance, tests of the operating effectiveness of controls over how an estimate was made may not be carried out and the verifier may not develop his/her own point estimate or estimate range to evaluate the responsible party's estimate	The verifier should design evidence gathering activities and develop verification evidence test the operating effectiveness of the controls how estimates were made. The verifier should develop his/her own point estimate or estimate range to evaluate the responsible party's estimate.
10	Evidence gathering plan	The verifier updates the evidence gathering plan primarily for potentially material misstatements. The depth of the evidence gathering activities is less at the limited level of assurance in particular tests of control, analytical procedures and the assessment of estimates. At a limited level of assurance, tests of controls are optional	The evidence gathering plan is continually updated until sufficient and appropriate evidence is gathered to allow the verifier to reach a conclusion. At reasonable level of assurance, there is an expectation, but not a requirement that the verifier will use tests of control in the evidence gathering plan
11.	Issuance Opinion	The opinion shall include a statement that the verification activities applied in a limited level of assurance verification are less extensive in nature, timing and extent than in a reasonable level of	The opinion shall be expressed in the positive form

PT. TÜV NORD Indonesia	Doc. Number	PGHG-TNI-01
	Rev. Number	08
Procedure For The Verification Of GHG Statements	Issued Date	24 Januari 2022
	Page	56 of 56

No.	Process	Limited Level of Assurance	Reasonable Level of Assurance
		assurance verification. The opinion shall be expressed in the negative form	

