Strategic Analysis and Risk Analysis

Verification Year | **Date of Last Revision** | **Revision Number**

1 Identification of the Installation

1.1 Operator

Operator Name

1.2 Installation Details

Installation name

Site name

1.3 Address

Street address

Town

County

Postcode

1.4 EU ETS Main Contact Person

Email

Phone

1.6 Activities according to Annex 1 of the EU ETS Directive

Number	Name of activity (Annex I of the ETS Directive)
1	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of
2	
3	
4	
5	

NOTE TO VERIFIERS :

This Risk Assessment template is an example and should be used alongside the guidance provided in Key Guidance Note II.2 on Risk Analysis.

Note matrix (3) - verification risk, given in Section 5 below is based upon that given on page 10 of the Key Guidance note but in a more intuitive format (ie the logic as described and presented in the KGN is reversed to make it more explicit and user friendly).

Where necessary , short plain english explanations are given in the Risk Table below, but the full definitions as in the MRR and AVR (and associated guidance) should be applied in practice.

This version of the exemplar shows only activity up to the Risk Analysis Stage. A separate exemplar is provided showing how the verifier might then plan tests and sampling, as well as record the results of testing for transparency.

2 Monitoring and Reporting Plan Review

2.1 Most Recent Update of the Monitoring Plan

Plan ID

Date of Approval

Number of previous versions applicable to this reporting year

2.2 Has any change to the applied monitoring tiers occurred during the reporting year?

2.3 Has an Annual Report on Progress to Highest Tier been submitted to the Competent Authority?

2.4 Has an Annual Report on Potential Improvements Identified by the Verifier been submitted to the Competent Authority?

2.5 Have any Notification of metering failure or other changes been made to the Competent Authority?

2.6 Have any variations been made to the Competent Authority?

3. Verification Implications

Free Text

If yes, has this been taken into account in the Risk Analysis/Verification Plan? [Yes/No, because]

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4 Review

4.1 Previous Year Verified Emissions if applicable. If not, use estimated for year: **27779**

Category: **A**

Optional Use: To check de minimis and minor categories are correct, auditor can use this space to calculate the aggregated percentage of de minimis and minor sources to confirm correct classification. E.g. there may be >1 de minimis source and the correct classification should be checked.

4.2 Required materiality level applied: **2%**

Free Text

4.3 Team/Verifier Competencies OK?: **Yes**

4.4 Time Allocation Sufficient: **Yes**

% contribution of each source stream to the total emissions declared

Items in blue columns auto-calculate once tonnes are put into column 4 below. Once tonnes data entered sort by Aggregate % and then Aggregate tonnes in columns (7) and (8) below

4.5 Contribution analysis & M/M/DM check

Source (1)	Fuel / Material Stream (2)	tonnes CO_2e (3)	%contribution (4)	Separate RA Table Below? (5)	Comments/Verification Focus (6) *Deminis = ≤1kt or ≤2% total (to 20kt) Minor = ≤5kt or ≤10% total (to 100kt)*	Agg %age (Largest to Smallest) (7)	Agg t (Largest to smallest) (8)
S3-4	F1 (Nat Gas)	20025.73	72.089%	1	Major	99.999%	27,779
S1	F1 (Nat Gas)	6926.8	24.935%	2	Major	27.909%	7,753
S2	F2 (HFO)	561.404	2.021%		Minor	2.974%	826
S8-11	F1 (Nat Gas)	203.99	0.734%		De minimis	0.953%	265
S1	F8 (Kero)	42.65	0.154%		De minimis	0.219%	61
S5-6	F4 (Nat Gas)	11.7	0.042%		De minimis	0.065%	18
S7	F3 (Nat Gas)	5.803	0.021%		De minimis	0.023%	6
S14	F6 (Propane)	0.551	0.002%		De minimis	0.002%	1
			0.000%			0.000%	0
			0.000%			0.000%	0
			0.000%			0.000%	0
		0	0.000%			0.000%	0
			100.00%		Check if not 100% - rounding?		

4.6 Previous Findings Closed?: **Yes/No**

Comments on Previous Findings

Free Text

4.7 Comments on Monitoring methodologies, data flow activities, control system and control environment

Free Text

5 Risk Analysis; Testing and Results

Copy/Paste as many sets of the table below as are needed for each of the identified Major Source Streams in 4.5 above; apply the risk rankings to each element of the table. The examples given below are indicative, the text in columns A, B and C must be edited to match the GHG monitoring and reporting elements identified in the Operator's data flow

Assigning Risk Ranks in the Risk Analysis Below

Severity relates to the severity of the impact upon the data. E.g. if the problem occurred would it result in a significant or insignificant mis-statement of data for that stream. If the data stream was a significant contributor to the overall total emissions, even an insignificant mis-statement in the individual data stream could have a material impact upon the aggregate total; therefore the overall contribution to the total needs to be taken into acccount also. This contribution is identified in Table 4.5 above

Likelihood relates to the chance that the problem would occur. Is it highly likely or not?

Inherent Risk relates to the implication that there might be a mis-statement arising in the data resulting from the attributes or characteristics of the source of the data (or its manipulation) in the absence of any quality controls

1) Inherent Risk

Likelihood \ Severity	L	M	H
L	Low	Low	Low
M	Low	Medium	Medium
H	Low	Medium	High

2) Control Risk

L	M	H

Low means there is a robust control in place and minimal liklihood that the control would breakdown or be mis-applied.
High means there is no control in place or breakdown etc is highly likely

3) Verification Risk

Inherent \ Control	L	M	H
L	Very Low	Low	Medium
M	Low	Medium	High
H	Medium	High	Highest

The higher the verification risk the greater depth of verification and amount of sampling and testing required in order to reduce the level of verification risk such that residual risk is acceptable

NOTE TO VERIFIERS :

(1) Inherent Risk relates to the implication that there might be a mis-statement arising in the data resulting from the attributes or characteristics of the source of the data (or its manipulation) in the absence of any quality controls

(2) Control Risk relates to the implication that a quality control in place might break down or be mis-applied (or might be non-existent) therefore meaning that any inherent risk identified **would** have an impact upon the data.

(3) Verification risk relates to the implication that an incorrect conclusion is arrived at as a result of failure to conduct sufficient breadth and depth of testing etc. Therefore the higher the verification risk (as a product if inherent and control risks) the more work is required to be done

Insert unique ID of relevant evidence item from Evidence Index

Table No. 1

Fuel/Source Stream : Natural Gas S1, S3-4

Activity (A)	Description (B)	Type of Risk (C)	Relevant to this data flow?	Inherent Risk: Severity	Inherent Risk: Likelihood	Inherent Risk: Risk	Verifier Assessment of client control activities & effectiveness	Control Risk	Verification Risk (& so depth of Verification Activity Required)	Verification Test Plan & Sampling Plan (if applicable)	Results of Testing & Verification Comments X reference to Document List	Evidence Reference	Residual Risk Acceptable?	Finding transferred to Issues Log ?
Measurement of flow	Installed equipment are appropriate?	Incorrect measurements	Yes	M	L	M	Annual calibration and maintenance regime in place	L	LOW					
Measurement of flow	If applicable - deduction meters from this source are appropriate?	Incorrect measurements	No											
Measurement of flow	Installed equipment location is appropriate?	Incorrect measurements	Yes	H	L	H	Appropriate location & installation configuration - correct length of minimum straight run of pipe etc	L	MEDIUM					
Measurement of flow	Installed equipment uncertainty acceptable?	Incorrect measurement, non compliance with tier	Yes	M	L	M	Input data to calculation stated to be checked and evidenced; and updated annually Calculation stated to follow recognised Standard or guidance	L	LOW					
Measurement of flow	Equipment Calibration and Maintenance?	Incorrect measurement	Yes	H	M	H	Meter is responsibility of mains gas supplier under their calibration and maintenance regime	L	MEDIUM					
Measurement of flow	Equipment failure?	Missing data, Incompleteness, Incorrect measurement	Yes	H	M	H	2 meter streams in place, main and back up	M	HIGH					
Measurement of flow	Alternative methods?	Missing data, Non compliance with tier, incorrect measurement	No	H	m	H	Alternate method agreed with Competent Authority and stated in procedures. But no missing data declared.	L	MEDIUM					

The next stage of workpaper completion is shown in the separate exemplar covering the sampling plan

Measurement of flow	Manipulation of source data to produce consumption?	Incorrect conversion factors or other errors in calculations	No	L	M	M	Potential for anomalies to arise as the spread sheets feed several different reporting processes with different needs which could result in changes being made by other users impacting upon wmissions reporting	M	MEDIUM					
Fuel sampling	Location & Frequency of sampling	Unrepresentative samples, non compliance with M&R requirements	Yes	H	L	H	Continuous on line sampling	M	HIGH					
Fuel analysis	Methodology appropriate?	Incorrect analysis	Yes	H	L	H	ISO 17025 certified provider used	M	HIGH					
Fuel analysis	Calibration appropriate?	Incorrect calibration , leading to incorrect factors, inaccuracy	Yes	H	L	H	Competent 3rd party used for maintenance	M	HIGH					
Fuel Consumption totals	Manual or automatic data transfer errors	Data transfer errors, incorrect tags, missing data, missing invoices, data entry errors, calculation errors, incorrect totals	Yes	H	L	H	A lot of manual transfers but cross checked between data co-ordinator and assistant. Initial consumption checked by commercial manager (invoices : internal meter reads)	H	HIGHEST					
Fuel Consumption totals	Conversion of STP to NTP done? *(Standard Temperature & Pressure)* *(Normal Temperature & Pressure)*	Incorrect calculation; failure to convert	Yes	M	L	M	Done automatically within the spread sheet	L	LOW					
Determination of NCV	Data transfer, calculation	Data transfer errors, incorrect tags, missing data, missing invoices, data entry errors, calculation errors, incorrect totals	Yes	H	M	H	Net Calorific Value (NCV) calculation determined b=via online analysis and downloaded into detailed spreadsheet	H	HIGHEST					
Determination of emission factor	Data transfer, calculation	Data transfer errors, incorrect tags, missing data, missing invoices, data entry errors, calculation errors, incorrect totals	Yes	H	L	H	Calculation based upon ISO6974; compressibility factor included Raw data linked automatically to calculation spread sheet	M	HIGH					
Determination of oxidation factor	Calculation errors	Calculation errors, processing errors, inaccuracy	Yes	M	L	M	Use of competent staff Default values selected	M	MEDIUM					
Selection & transfer of Default Factors	Data transfer, calculation	Incorrect default; data transfer error; incorrect units	Yes	H	M	H	Updated factors taken from DECC website	M	HIGH					

Calculation of CO2 values	Calculation of : Activity data x EF x NCV	Calculation errors, processing errors, inaccuracy	Yes	H	M	H	Standard templates and separation of responsibilities for input, calculation and QA/QC	M	HIGH					
Data reporting	Data transfer to AER Template	Data transfer error, missing information	Yes	H	M	H	Transfer process done by####	M	HIGH					
Additional Item 1	Additional Item - insert any data flow element not included in the list above													
Additional Item 2	Additional Item - insert any data flow element not included in the list above													

USING THE TABLE BELOW AS A TEMPLATE, INSERT MORE COPIES OF THE TABLE IF NEEDED FOR ADDITIONAL SOURCE STEAMS TO BE ANALYSED

Table No. | **Fuel/Source Stream :**

Activity (A)	Description (B)	Type of Risk (C)	Relevant to this data flow?	Inherent Risk			Verifier Assessment of client control activities & effectiveness	Control Risk	Verification Risk (& so depth of Verification Activity Required)	Verification Test Plan & Sampling Plan (if applicable)	Results of Testing & Verification Comments X reference to Document List	Evidence Reference	Residual Risk Acceptable?	Finding transferred to Issues Log ?
				Severity	Likelihood	Risk								
Measurement of flow	Installed equipment are appropriate?	Incorrect measurements												
Measurement of flow	If applicable - deduction meters from this source are appropriate?	Incorrect measurements												
Measurement of flow	Installed equipment location is appropriate?	Incorrect measurements												
Measurement of flow	Installed equipment uncertainty acceptable?	Incorrect measurement, non compliance with tier												
Measurement of flow	Equipment Calibration and Maintenance?	Incorrect measurement												
Measurement of flow	Equipment failure?	Missing data, Incompleteness, Incorrect												
Measurement of flow	Alternative methods?	Missing data, Non compliance with tier,												
Measurement of flow	Manipulation of source data to produce consumption?	Incorrect conversion factors or other errors in												
Fuel sampling	Location & Frequency of sampling	Unrepresentative samples,												
Fuel analysis	Methodology appropriate?	Incorrect analysis												
Fuel analysis	Calibration appropriate?	Incorrect calibration ,												
Fuel Consumption totals	Manual or automatic data transfer errors	Data transfer errors, incorrect tags, missing data, missing invoices,												
Fuel Consumption totals	Conversion of STP to NTP done? *(Standard Temperature & Pressure) (Normal Temperature & Pressure)*	Incorrect calculation; failure to convert												
Determination of NCV	Data transfer, calculation	Data transfer errors, incorrect tags, missing												
Determination of emission factor	Data transfer, calculation	Data transfer errors, incorrect tags, missing data, missing invoices,												
Determination of oxidation factor	Calculation errors	Calculation errors, processing errors, inaccuracy												
Selection & transfer of Default Factors	Data transfer, calculation	Incorrect default; data transfer error; incorrect units												
Calculation of CO2 values	Calculation of : Activity data x EF x NCV	Calculation errors, processing errors,												
Data reporting	Data transfer to AER Template	Data transfer error,												
Additional Item 1	Additional Item - insert any data flow element not included in the list above													
Additional Item 2	Additional Item - insert any data flow element not included in the list above													