

ECRAN Climate
Emissions Trading Working Group
Advanced Technical Training Programme on the EU Verification
and Accreditation Regulation
Zagreb, Sisak and Drnis, Croatia, 20-23 April 2015

EXERCISE – UNCERTAINTY AND MATERIALITY

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This Project is funded by the European Union



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Consortium

UNCERTAINTIES FOR TIERS – ACTIVITY DATA

Tier No.	Definition
1	Amount of fuel [t] or [Nm ³] over the reporting period ⁹ is determined with a maximum uncertainty of less than ± 7.5 %.
2	Amount of fuel [t] or [Nm ³] over the reporting period is determined with a maximum uncertainty of less than ± 5.0 %.
3	Amount of fuel [t] or [Nm ³] over the reporting period is determined with a maximum uncertainty of less than ± 2.5 %.
4	Amount of fuel [t] or [Nm ³] over the reporting period is determined with a maximum uncertainty of less than ± 1.5 %.



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EXERCISE 1 - UNCERTAINTY

- source stream: natural gas
- flow meter
 - under operator's control
 - subject to national metrological control
- no p-T compensation
- verification certificate of the instrument available
- MPES allowed = 1,0 %
- **question: is uncertainty threshold met?**



EXERCISE 2 - UNCERTAINTY

- source stream: fuel oil
- flow meter
 - under operator's control
 - not subject to national metrological control
 - installed in the appropriate environment
- uncertainty obtained by calibration = 1,15 %
- calibration certificate available
- conservative adjustment factor = 2
- **question: is uncertainty threshold met?**



EXERCISE 3 - UNCERTAINTY

- source stream: fuel oil
- flow meter
 - under operator's control
 - not subject to national metrological control
 - installed in the appropriate environment
- tier 4 incurs unreasonable costs – tier 3 approved by CA
- uncertainty obtained by calibration = 1,15 %
- calibration certificate available
- conservative adjustment factor = 2
- **question: is uncertainty threshold met?**



MINIMUM FREQUENCY OF ANALYSIS

Minimum frequency of analyses (Article 35)

Fuel/material	Minimum frequency of analyses
Natural gas	At least weekly
Other gases, in particular synthesis gas and process gases such as refinery mixed gas, coke oven gas, blast-furnace gas, convertor gas	At least daily — using appropriate procedures at different parts of the day
Fuel oils (for example light, medium, heavy fuel oil, bitumen)	Every 20 000 tonnes of fuel and at least six times a year
Coal, coking coal, petroleum coke, peat	Every 20 000 tonnes of fuel/material and at least six times a year
Other fuels	Every 10 000 tonnes of fuel and at least four times a year
Untreated solid waste (pure fossil or mixed biomass/fossil)	Every 5 000 tonnes of waste and at least four times a year
Liquid waste, pre-treated solid waste	Every 10 000 tonnes of waste and at least four times a year
Carbonate minerals (including limestone and dolomite)	Every 50 000 tonnes of material and at least four times a year
Clays and shales	Amounts of material corresponding to 50 000 tonnes of CO ₂ and at least four times a year
Other materials (primary, intermediate and final product)	Depending on the type of material and the variation, amounts of material corresponding to 50 000 tonnes of CO ₂ and at least four times a year'



EXERCISE 4 - UNCERTAINTY

- source stream: fuel oil
- analysis by external accredited laboratory
- analysis for NCV [MJ/kg]:
 - January 40,25
 - February 40,06
 - August 41,12
 - September 41,44
 - October 40,98
 - December 40,81
- **question: is uncertainty requirement for NCV met?**



EXERCISE 5 – MATERIALITY (1)

	A	B	C	D	E	F
1						
2		SOURCE STREAM	EMISSION REPORT [t]	VERIFICATION ANALYSIS [t]	MATERIALITY [%]	
3						
4		NATURAL GAS	36.500	36.100		
5		FUEL OIL	5.500	5.800		
6		TOTAL EMISSIONS	42.000	41.900		
7						
8						
9						
10						

- question: what should verifier do in this case?



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EXERCISE 5 – MATERIALITY (2)

	A	B	C	D	E	F
1						
2		SOURCE STREAM	EMISSION REPORT [t]	VERIFICATION ANALYSIS [t]	MATERIALITY [%]	
3						
4		NATURAL GAS	36.500	36.100	1,1%	
5		FUEL OIL	5.500	5.800	-5,5%	
6		TOTAL EMISSIONS	42.000	41.900	0,2%	
7						
8						
9						
10						



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