



INZRAK

Enhanced environmental protection inspection for efficient control of air quality monitoring and of all entities under obligation within system of greenhouse gas emission allowance trading, in order to achieve better quality of air in Republic of Croatia



REPUBLIKA HRVATSKA

MINISTARSTVO ZAŠTITE
OKOLIŠA I ENERGETIKE



 **safu** | SREDIŠNJA AGENCIJA ZA
FINANCIARANJE I UGOVARANJE



This project is funded by the European Union



EKONERG

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Institut za energetiku i zaštitu okoliša



USING INFORMATION FROM TEMPLATES AND REPORTS

CONTENTS

- Emission Monitoring plan
- Emission Report
- Verification Report
- Improvement Report
- Information on changes of capacity, level of activity and operation of an installation
- Information and documentation available on websites
<http://www.haop.hr/hr/tematska-podrucja/zrak-klima-tlo/klimatske-promjene>
<http://www.mzoip.hr/hr/klima/obraci-i-ocevidnici.html>

EMISSION MONITORING PLAN

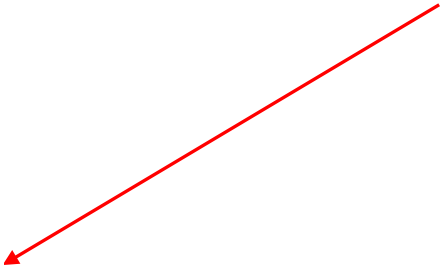
- Prescribed structure
- Instructions
- Prescribed annexes
- Detailed, complete and transparent documentation on emission monitoring methodology
- Procedures
- Monitoring plan for installation operators
- Monitoring plan for aircraft operators
 - Nature and mode of operation of an installation or aviation activity

INFORMATION IN THE MONITORING PLAN FOR EMISSIONS OF OPERATORS

	A	B	C	D	E	F	G	H	I	
25		11 Management and procedures for measurement based approaches								
26		G. Fall-back Approaches								
27		12 Description of the Fall-back approach								
28		H. N2O emissions								
29		13 Management and procedures for monitoring N2O emissions								
30		I. Determination of PFC emissions from production of primary aluminium								
31		14 Determination of PFC emissions								
32		15 Monitoring details for source streams of PFC emissions								
33		16 Management and written procedures for PFC monitoring								
34		J. Determination of transferred or inherent CO2								
35		17 Determination of inherent and transferred CO2								
36		18 Information relevant for pipeline systems used for transport of CO2								
37		19 Information relevant for installations for the geological storage of CO2								
38		K. Management & Control								
39		20 Management								
40		21 Data flow activities								
41		22 Control activities								
42		23 List of definitions and abbreviations used								
43		24 Additional information								
44		25 Changes in operation								
45		L. Member State specific further information								
46		26 Comments								
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48										
49		Information about this file:								
50		This monitoring plan was submitted by:		<input type="text"/>						
51		Installation name:		<input type="text"/>						
52		Unique installation identifier:		<input type="text"/>						
53		Version Number of this monitoring plan:		<input type="text"/>						
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– Monitoring plan version



INFORMATION IN THE MONITORING PLAN FOR EMISSIONS OF AIRCRAFT OPERATORS



– Monitoring plan version

A	B	C	D	E	F	G	H	I	J	K
1	ANNUAL EMISSIONS MONITORING PLAN									
2										
3	CONTENTS									
4	0	Guidelines and conditions								
5	1	Monitoring Plan versions								
6	2	Identification of the aircraft operator								
7	3	Contact details								
8	4	Emission sources and fleet characteristics								
9	5	Eligibility for simplified approaches								
10	6	Activity data								
11	7	Uncertainty assessment								
12	8	Emission factors								
13	9	Simplified calculation of CO ₂ emissions								
14	10	Data Gaps								
15	11	Management								
16	12	Data Flow Activities								
17	13	Control Activities								
18	14	List of definitions and abbreviations used								
19	15	Additional information								
20	16	Member State specific further information								
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22	Information about this file:									
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24	Unique Identifier of the aircraft operator (CRCO No.):									
25	Version Number of this monitoring plan:									
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41	Template version information:									
42	Template provided by:	European Commission								
43	Publication date:	16/07/2012								
44	Language version:	English								
45	Reference filename:	MP P3 Aircraft COM en 160712.xls								
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A	B	C	D	E	F	G	H	I	J	K
1	MONITORING PLAN FOR TONNE-KILOMETRE DATA									
2										
3	CONTENTS									
4	0	Guidelines and conditions								
5	1	Monitoring Plan versions								
6	2	Identification of the aircraft operator								
7	3	Contact details								
8	4	Emission sources and fleet characteristics								
9	5	Distance								
10	6	Payload								
11	7	Management								
12	8	Data Flow Activities								
13	9	Control Activities								
14	10	List of definitions and abbreviations used								
15	11	Additional information								
16	12	Member State specific further information								
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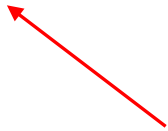
MONITORING PLAN VERSIONS

- **Version list**
 - Version number
 - Date
 - Monitoring plan status
 - Chapters where amendments were made - explanation
- **operator must archive copies of all Monitoring plan versions**



INFORMATION ON THE OPERATOR

- Name
- Version number of the current monitoring plan
- Address
- Contact information
- Permit number



INSTALLATION DESCRIPTION (1)

- **Information on emissions**
 - description of the installation and its activities
 - reference to the document Source Stream Diagram - Annex
 - list of activities at the installation
 - annual emissions
 - installation category (A, B, C)
 - Establishment of the requirement for minimum tier
 - low emission installation- simplified monitoring plan
 - reasons for valuation



INSTALLATION DESCRIPTION (2)

2	C.	Navigation area:	Table of contents	Previous sheet	Next sheet	Examples
3	Installation	Top of sheet	Installation Activities	Monitoring approaches	Emission sources&points	
4	Description	End of sheet	Measurement points	Source streams	Activities excluded	
5						
6	C. Installation Description					
7						
8	5 About the Installation Activities					
9						
10	Please use this sheet for describing your installation. The information entered here prepares the necessary detailed inputs in the following					
11	In particular, source streams will be described in more detail in sheet E_SourceStreams, and measurement points in sheet					
12	F_MeasurementBasedApproaches.					
13	(a) Description of the installation and its activities:					
14	<i>Please provide here a brief outline description of the site and the installation, and describe the location of the installation on the site. The description should also include a non-technical summary of the activities carried out at the installation, briefly describing each activity performed and the technical units used within each activity. In particular, the description should also identify and explain any part(s) of the installation which are not operated by the applicant, or parts which are not deemed to fall under the scope of the EU ETS.</i>					
15	<i>This description should provide the linking information which is needed to understand, how the information given in other parts of this template are used together for calculating the emissions. It may be as short as the given example in sheet D_CalculationBasedApproaches, section 7(a).</i>					
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Note: the most important parts of the sheets are shown, without explanations and instructions

INSTALLATION DESCRIPTION (3)

- **Information on emissions - continued**
 - Monitoring methodology - calculation, measuring
 - Emission sources
 - Emission points and released greenhouse gases
 - Continuous emission measuring systems – measuring points
 - Emission source categories: main, smaller, de-minimis
 - Relevant source streams
 - Estimated emissions and source stream categories



INSTALLATION DESCRIPTION (4)

B	C	D	E	F	G	H	I	J	K	L	M	N	O	AC	AD	AE	AF				
2	C.		Navigacijsko područje:	Sadržaj	Prethodni list	Slijedeći list															
3	Opis		Vrh lista	Aktivnosti postrojenja	Metodologija praćenja	Izvori emisija (točke)															
4	postrojeni		Dno lista	Mjerne točke	Tokovi izvora	Ispuštene aktivnosti															
86	6 Podaci o emisijama																				
87	(a) Metodologija praćenja predložena za primjenu:																				
88	Metodologija proračuna CO2:																				
94	Metodologija mjerenja CO2:																				
95	Nadomjesna metodologija (članak 22.):																				
96	Praćenje N2O emisija:																				
97	Praćenje PFC emisija:																				
98	Praćenje prenesenog/inherentnog CO2 i CCS:																				
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101																					
102																					
103	(b) Izvori emisija:																				
109	Oznaka izvora emisije	Izvor emisije (naziv, opis)	Oznaka aktivnosti																		
110	S1, S2,...																				
111	S01	Pec cementnog klinkera (dekarbonizacija sirovine, izgaranje goriva)	A1																		
112	S02	Kotao za ugljen (izgaranje goriva)	A2																		
113	S03	Kotao za ugljen (dekompozicija vapnenca za čišćenje dimnih plinova)	A2																		
114	S1																				
115	S2																				
116	S3																				
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118	S5																				
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120	S7																				
121	S8																				
122	S9																				
123	S10																				
124																					
126	 Klikni "+" kako bi dodali nove izvore emisija																				
128																					
129	(c) Točke emisija i ispušteni staklenički plinovi																				
135	Oznaka točke emisije EP1, EP2,...	Opis točke emisije	Oznaka aktivnosti	Oznaka izvora emisije	Emitirani staklenički plinovi																
136	EP01	Ispust 1 (kotao za ugljen)	A02	S102, S03	CO2																
137	EP02	Ispust 2 (cementna pec)	A01	S01	CO2																
138	EP1																				
139	EP2																				
140	EP3																				
141	EP4																				
142	EP5																				
143	EP6																				
144	EP7																				
145	EP8																				
146	EP9																				
147	EP10																				
149																					
151	 Klikni "+" kako bi dodali nove točke emisija																				
153																					
154	(d) Mjerne točke, gdje su ugrađeni sustavi za kontinuirano mjerenje emisija :																				
155	<table border="1"> <thead> <tr> <th></th> <th>relevantno</th> </tr> </thead> <tbody> <tr> <td>Molimo unesite podatke u ovo polje</td> <td></td> </tr> </tbody> </table>																		relevantno	Molimo unesite podatke u ovo polje	
	relevantno																				
Molimo unesite podatke u ovo polje																					

EMISSION SOURCES AND AIRCRAFT FLEET

- **Information on activities**

- Aircraft type and number
- Procedure name and description – monitoring the integrity of the emission source list, flight list, avoiding double counting, ...
- Simplified procedures

- **Information on tonne-kilometres**

- distance
- capacity

Request
for free
allocation
of emission
allowances



CALCULATION METHODOLOGY (1)

- **Calculation of emissions from an installation**
 - Calculation approach for CO₂ emission monitoring - description
 - Specification and location of measuring systems – for each source stream
 - Reference to a document for estimation of uncertainty calculation – annex
 - Default values of calculation factors
 - Determination of calculation factors – laboratories and analytical methods
 - Procedures description - analyses, sampling plans, supply estimate, monitoring of installed instruments



CALCULATION METHODOLOGY (2)

B	C	D	E	F	G	H	I	J	K	L	M	N	O	X	Y	Z	AA	AB
2		D.	Navigacijsko područje:	Sadržaj	Prethodni list	Sledeći list												
3		Postupak proračuna	Vrh lista	Opis	Mjerni instrumenti	Izvori informacija:												
4			Dno lista	Laboratorij	Procedure													
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(b) Specifikacija i lokacija mjernih sustava za određivanje podataka o djelatnostima za tokove izvora:

Oznaka	Tip mjernog instrumenta	Lokacija (interni ID)	jedinica	Raspon mjerenja		Specificiran a nesigurnost	Uobičajen raspon korištenja	
				donja granica	gornja granica		donja granica	gornja granica
M01	rotacijsko mjerilo	UBA FMA-2P	Mt/h	0	250	3	500	750
M02	težna vaga	VE-342	Kg	0	1000	1.5	7500	40000
M11								
M12								
M13								
M14								
M15								
M16								
M17								
M18								
M19								
M10								

+


Pritisnite "+" kako bi dodali više mjernih instrumenata

(c) Naslov i referenca dokumenta za procjenu izračuna

(d) Popis izvora informacija za zadane vrijednosti faktora proračuna:

Oznaka izvora	Opis izvora informacija
IS01	Nacionalni inventar stakleničkih plinova, ažuriran na godišnjoj razini (vidi www.azc.hr/tvujje-sca2/). Koriste se najnovije vrijednosti objavljene u tekstu.
IS02	Handbook of Chemistry and Physics, 92. izdanje. http://www.hbcpnetbase.com/
IS03	LDV i EF analize za tok izvora "macuz" MFS-a 2013.g.
IS1	
IS2	
IS3	
IS4	
IS5	
IS6	
IS7	
IS8	
IS9	
IS10	
IS11	
IS12	
IS13	

CALCULATION METHODOLOGY (3)

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2	D.		Navigacijsko područje:	Sadržaj	Prethodni list	Sledeći list																																																																																																																									
3	Postupak		Vrh lista	Opis	Mjerni instrumenti	Izvori informacija:																																																																																																																									
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129	(e) Laboratoriji i analitičke metode korištene za određivanje faktora proračuna:																																																																																																																														
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EMISSION CALCULATION FOR AIRCRAFTS

- **Information on activity**

- method A
 - method B
- } Fuel consumption
- Name and description of procedures – method description, fuel consumption monitoring



- **Uncertainty estimation**

- For each fuel type (source stream)
- Name and description of procedures – in accordance with requirements of a certain level

- **Emission factors**

- Default values of calculation factors – standard fuels
- Determination of calculation factors – laboratories and analytical methods
- Procedures name and description

- **Simplified calculation**

SOURCE STREAMS (1)

- **Tiers for information on activities and calculation factors in installations**
 - Type of source stream
 - Applicable method
 - Parameter for which uncertainty calculation is determined
 - Information on activity – determination methods, measuring instruments, required and used tiers, achieved uncertainty
 - Calculation factors – required and used tiers, details (analysis and sampling label, frequency of analysis)
 - Explanations if required tiers were not applied



SOURCE STREAMS (2)

B	C	D	E	F	G	H	I	J	K	L	M	N	X
2			Navigationijsko područje:		Sadržaj		Prethodni list		Sljedeći list				
3	E. Tokovi		Vrh lista		1		2		3				
4	izvora		Dno lista		4		5		6 od 10				
18												Primjeri	
19			F1 Tok izvora 1:										
21			Vrsta toka izvora:										
22			Primjenjiva metoda prema Pravilniku:										
23			Parametar za koji se mora odrediti proračun nesigurnosti:										
25			Primjer toka izvora:				Mazut				Glavni:		
27			Vrsta toka izvora:				Izgaranje: druga plinovita i tekuća goriva						
28			Primjenjiva metoda prema Pravilniku:				Standardna metoda: Gorivo, članak 24. stavak 1.						
29			Parametar za koji se mora odrediti proračun nesigurnosti:				Količina goriva (t) ili (Nm ³)						
35			Automatske upute o primjenjivim razinama točnosti:										
43													
45			Primjer:										
46							"Članak 26. stavak 1: Primjenit će se barem minimalne razine točnosti prikazane u nastavku.						
47							Međutim, može se koristiti do dvije razine nižu razinu točnosti, s najmanje razinom točnosti 1. Tada je potrebno dokazati Ministarstvu da je zahtjevana razina točnosti tehnički neizvediva ili stvara neopravdano visoke troškove."						
48			Podaci o aktivnosti:										
50			(a) Metoda određivanja podataka o aktivnosti:										
52			i. Metoda određivanja:										
53							Kontinuirano mjerenje						
54							<i>Na temelju članka 27. stavka 1, podaci o aktivnosti toka izvora mogu se utvrditi (a) kontinuiranim mjerenjem količine ili (b) na temelju zbroja količina pojedinačnih isporuka uzimajući u obzir promjene zaliha i mjerenje promjene zaliha.</i>						
56							Oznaka procedure za utvrđivanje zaliha na kraju godine:						
57													
61			ii. Instrumenti pod nadzorom:										
62							Operater						
66			a. Potvrdite da su ispunjeni zahtjevi iz članka 29. stavka 1.										
67													
68			<i>Dva točka je relevantna ako niste vlasnik mjernog instrumenta.</i>										
69			<i>Na temelju članka 29. stavka 1, može se koristiti kao izvor podataka instrumente koji nisu pod vašim nadzorom, samo ako ti instrumenti odgovaraju najmanje istoj razini točnosti kao i vaši instrumenti, a daju pouzdanje rezultate i manje su skloni rizicima pri nadzoru.</i>										
71			b. Koristite li se fakture za utvrđivanje količine goriva ili sirovina?										
72													
73			<i>Dva točka je relevantna ako niste vlasnik mjernog instrumenta.</i>										
75			c. Potvrdite da su trgovinski partner i operater neovisni.										
76													
77			<i>Dva točka je relevantna ako niste vlasnik mjernog instrumenta.</i>										
78			<i>Na temelju članka 29. stavka 1, točka (a) smjene koristiti samo fakture ako su trgovinski partneri neovisni.</i>										
79													

SOURCE STREAMS (3)

B	C	D	E	F	G	H	I	J	K	L	M	N	X	Y																																																								
2	E. Tokovi izvora		Navigacijsko područje:		Sadržaj	Prethodni list	Slijedeći list		Primjeri																																																													
3			Vrh lista		1	2	3																																																															
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79	(b) Korišteni mjerni instrumenti:																																																																					
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MEASURING METHODOLOGY (1)

- **CO₂ and N₂O emission measuring at an installation**
 - Methodology description – types of instruments, formulas, factors ...
 - Process diagram
 - Specification and location of measuring systems for measuring points
 - Reference to the document for uncertainty calculation estimation – annex
 - Laboratories and continuous measuring methods
- **measuring point specifications**
 - measuring instruments used
 - required and used tier, uncertainty achieved
 - norms applied and deviations from them
 - References for procedures - annexes

MEASURING METHODOLOGY (2)

F. Navigacijsko područje:		G. Sadržaj	I. Prethodni list	K. Slijedeći list	M. N. O. Z. AA					
2	Metodologija mjerenja	Vrh lista Dno lista	Mjerenje emisija Upravljanje i postupci	Mjerna točke	Primjeri					
42	(b) Dijagram procesa:									
43										
44	(c) Specifikacija i lokacija mjernih sustava za mjerne točke:									
45										
46										
47										
58	Oznaka	Tip mjernog instrumenta	Lokacija (interni ID)	Raspon mjerenja		Specificirana nesigurnost (+/-%)	Uobičajen raspon korištenja		Učestalost mjerenja	
jedinica				donja granica	gornja granica		donja granica	gornja granica		
59	MM01	konzentracija CO2 (NDIR)	Ispust 1 platforma A	g CO2/m2	0	250	5.5	25	200	1u sekundi
60	MM02	Mjerenje protoka (Pitotova cijev, uprosječeno mjerenje)	Ispust 1 platforma A	m3/h	10	10,000	4.0	1,000	8,000	1u sekundi
61	MM1									
62	MM2									
63	MM3									
64	MM4									
65	MM5									
66	MM6									
67	MM7									
68	MM8									
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70	MM10									
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90										
91	(d) Naslov i referenca dokumenta za procjenu izračuna nesigurnosti:									
92										
93	(e) Laboratoriji i metode korištene za primjenu kontinuiranog mjerenja:									
94										
95										
100	Oznaka laboratorija	Ime laboratorija	Analitički parametar	Analitička metoda (uključujući oznaku procedure i kratki opis metode)	Je li laboratorij akreditiran sukladno	Ako nije, navedite oznaku dokumenta u kojem se referirate na taj dokaz.				
101	LC01	Laboratorij d.o.o.	GHG	HRVEN 14181	TRUE					
102	LC02	Analica d.o.o.	CO2 koncentracija	ISO 12039	FALSE	Lab_kompetentnost.pdf 3/3/2012				
103	LC1									
104	LC2									
105	LC3									
106	LC4									

+ Pritisnite "+" kako bi dodali više mjernih instrumenata

MEASURING METHODOLOGY (3)

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Z	AA
2			F.	Navigacijsko područje:		Sadržaj		Prethodni list		Slijedeći list						
3			Metodologija	Vrh lista		Mjerenje emisija		Mjerne točke								
4			mjerenja	Dno lista		Upravljanje i postupci										
135			M1	Točka mjerenja 1:												
137			(a)	Način rada:												
139			Primjer:			Ispust peći na ugljen, mjerna platforma A						CO2				
141						Redovni i izvanredni rad						Glavni:				
146				Automatske upute o primjenjivim razinama točnosti:												
151																
152																
153																
154																
156			(b)	Korišteni mjerni instrumenti:												
157						MM1: CO2	MM2: Protokol									
162				Komentar/opis pristupa ako se koristi više instrumenata:												
164																
165																
166																
167																
168			(c)	Zahtjevana razina točnosti:												
169			(d)	Korištena razina točnosti:												
170			(e)	Postignuta nesigurnost:			Komentar:									
171			Primjer:													
172			(c)	Zahtjevana razina točnosti:		4	Nesigurnost ne smije biti viša od ± 2.5%									
173			(d)	Korištena razina točnosti:		3	Nesigurnost ne smije biti viša od ± 5.0%									
174			(e)	Postignuta nesigurnost:		3.60%	Komentar:									
179																
180				Norme i procedure:												
182			(f)	Primjenjene norme i odstupanje od istih												
185																
186																
187																
188																
189			(g)	Reference na procedure												
192			i.	Formule za objedinjavanje podataka i utvrđivanje godišnjih emisija.												
193																
195			ii.	Metoda za utvrđivanje valjanih satnih vrijednosti ili kraćih referentnih razdoblja potrebnih za izračun svakog parametra sukladno uvjetu u članku 44. stavku 2. i za utvrđivanje zamjenskih podataka koji nedostaju, u skladu sa člankom 45.												
196																

FALL-BACK APPROACH

- **description of the monitoring methodology at an installation**
 - all source streams or emission sources
 - explanation for application
 - Why is calculation methodology or measuring methodology technically not feasible?
 - Total uncertainty of annual emission levels? ...
 - written procedures for annual uncertainty analysis



MANAGEMENT AND CONTROL

- **procedures and details on procedures - annexes**
 - Management
 - Data flow
 - Control activities
 - List of definitions and abbreviations used
 - Additional information
 - Planned/effective capacity changes



MANDATORY MONITORING PLAN ANNEXES

- **evidence of harmonization with uncertainty thresholds**
 - for data on activity and calculation factors
 - for levels applied - Annex II and Annex III of Regulation 601/2012
 - for each source stream and emission source
- **risk assessment results**
 - evidence that proposed monitoring activities and procedures for monitoring activities are proportional to determined inherent risks and monitoring risks

INFORMATION IN THE EMISSION REPORT OF OPERATORS

	A	B	C	D	E	F	G	H	I	J	K	L
1	<u>IZVJEŠĆE O GODIŠNJIM EMISIJAMA</u>											
2												
3	Sadržaj											
4												
5	Imena listova prikazana su u podebljanom fontu, a imena poglavlja u normalnom fontu.											
6												
7	<u>a_Sadržaj</u>											
8	<u>b_Upute i uvjeti</u>											
9												
10	<u>A_Identifikacija operatera & postrojenja</u>											
11	Godina izveštavanja											
12	Podaci o operateru											
13	Podaci o postrojenju											
14	Kontakt podaci											
15	Kontakt podaci verifikatora											
16												
17	<u>B_Opis Postrojenja</u>											
18	Aktivnosti priloga I											
19	Metodologija praćenja											
20	Tokovi izvora											
21	Mjerne točke											
22												
23	<u>C_Tokovi izvora</u>											
24												
25	<u>D_Metodologija temeljena na mjerenju</u>											
26												
27	<u>E_Nadomjesni pristup</u>											
28												
29	<u>F_Određivanje PFC emisija iz proizvodnje primarnog aluminija</u>											
30												
31	<u>G_Nedostajući podaci</u>											
32												
33	<u>H_Dodatne informacije</u>											
34	Detaljni opis proizvodnog procesa											
35	Pojmovi i kratice											
36	Dodatne informacije											
37	Komentari											
38												
39	<u>I_Sažetak</u>											
40												
41	<u>J_Proračun</u>											
42												
43	Informacije o ovom dokumentu:											
44	Ovo izvješće o godišnjim emisijama podneseno je od strane:											
45	Naziv postrojenja:											
46	Jedinstveni ID postrojenja:											
47												
	a_Sadržaj b_Upute i uvjeti A_Ident.Operatorera&Postr. B_Opis_postrojenja C_Tokovi_izvora D_Metodologija_mjerenja E_Nadomjesni_pristup											



INFORMATION IN THE EMISSION REPORT OF OPERATORS



- monitoring plan version
- total emissions, tonne-kilometres

ANNUAL EMISSIONS REPORT FOR AIRCRAFT OPERATORS

CONTENTS

[Guidelines and conditions](#)

1 [Reporting year](#)

2 [Identification of the aircraft operator](#)

3 [Identification of the Verifier](#)

4 [Information about the monitoring plan](#)

5 [Total emissions](#)

6 [Use of simplified procedures](#)

7 [Approach for data gaps](#)

8 [Detailed emissions data](#)

9 [Aircraft data](#)

10 [Member State specific further information](#)

11 [Annex Emissions per aerodrome pair](#)

Reporting year: []

Information about this report:

This Annual Emissions Report was submitted by: []

Unique Identifier of the aircraft operator (CRCO No.): []

Version number of the latest approved monitoring plan: []

Total emissions of the aircraft operator: [] **0 t CO₂**

This is the amount of allowances to be surrendered by the aircraft operator, as calculated in section 5(c). This figure should only include emissions to be reported under the EU ETS, i.e. relate to the reduced scope.

Memo-Item: Total (sustainable) biomass emissions [] **0 t CO₂**

Memo-Item: Total non-sustainable biomass emissions [] **0 t CO₂**

If your competent authority requires you to hand in a signed paper copy of the monitoring plan, please use the space below for signature:

Contents | Guidelines and conditions | Identification and description | Emissions overview | Emissions Data | Aircraft Data

TONNE-KILOMETRE DATA REPORT OF AIRCRAFT OPERATORS

CONTENTS

[Guidelines and conditions](#)

1 [Reporting year](#)

2 [Identification of the aircraft operator](#)

3 [Identification of the Verifier](#)

4 [Information about the monitoring plan](#)

5 [Tonne-kilometre Data](#)

6 [Aircraft data](#)

10 [Member State specific further information](#)

Reporting year: [] **2013**

Information about this report:

This tonne-kilometre report was submitted by: []

Unique Identifier of the aircraft operator (CRCO No.): []

Version Number of the latest approved monitoring plan: []

Total tonne-kilometres of the aircraft operator: [] **0 [t* km]**

This value is taken from section 5(b).

If your competent authority requires you to hand in a signed paper copy of the report, please use the space below for signature:

_____ Date _____ Name and Signature of legally responsible person

Contents | Guidelines and conditions | Identification and description | Tonne-kilometre Data | Aircraft Data | MS specific over

APPLYING THE MONITORING PLAN WHEN DRAFTING THE EMISSION REPORT – DATA COMPARISON

- **information on the operator**
 - Information on the monitoring plan of the operator – state if there were modifications and describe them (Report sheet A ↔ Report sheet B)
 - Information on the verifier – contact information, accreditation
- **information on activities and methodologies**
 - Report sheet B ↔ operator's plan sheet C
- **information on emissions**
- **information on stream sources**



INSTALLATION DESCRIPTION

2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	B. Opis postrojenja		Navigacijsko područje:		Sadržaj	Prethodni list	Slijedeći list						
3			Vrh lista		Aktivnosti	Metodologija praćenja	Tokovi izvora						
4			Dno lista		Mjerne točke								
5	B_Opis_Postrojenja												
6	6 Djelatnosti u skladu s Prilogom I. EU ETS Direktive												
7													
8													
23	Oznaka	Djelatnost iz Priloga I.	CRF kategorija 1 (Energija)	CRF kategorija 2 (Procesne emisije)	Ukupni kapacitet instaliranih	Jedinice kapaciteta	Emitirani staklenički						
24	A01	Proizvodnja cementnog klinkera	1A3 - Energetika - Ostala industrija	2A1 - Industrijski procesi - Proizvodnja cementa	1500	tona po danu	CO2						
25	A02	Izgaranje goriva	1A1a - Energetika - Proizvodnja električne i toplinske energije		120	MWh	CO2						
26	A1												
27	A2												
28	A3												
29	A4												
30	A5												
31	7 O emisijama												
32	(a) Metodologije praćenja:												
33													
34													
42	Metodologija na temelju proračuna za CO2:												
43	Metodologija na temelju mjerenja za CO2:												
44	Nadomjesna metodologija (članak 22.):												
45	Praćenje emisija N2O:												
46	Praćenje emisija PFC-a:												
47	Praćenje prenesenog/inherentnog CO2 i CCS-a:												
48													
49	(b) Relevantni tokovi izvora:												
50													
51													
52													
53													
54													
55													
56													
57													
58													
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98													
99													
100													

STREAM SOURCES

- Report sheet C and installation operator's Plan sheet E
 - Differences are possible but they must be commented on

4	F4. Materijal – Ostali karbonati; Vapnenac				Procesne emisije	Fosilni CO2:	33,269.9	t CO2e
	Cemetni klinker: Na temelju ulaza u peć (metoda A)					CO2 iz biomase:	0.0	t CO2e
<i>Detaljne upute za unošenje podataka u ovom alatu mogu se pronaći na vrhu ovog lista.</i>								
i. PA:	Temelje li se PA na zbrojenim izmjerenim količinama (tj. ne na kontinuiranom mjerenju)?					TRUE		
ii. PA:	Početak:	6,125.35	Završetak:	2,493.18	Uvoz:	72,840.50	Izvoz:	2,951.38
iii. PA:	Razina	Opis razine	Jedinica	Vrijednost	pogreška			
	3	± 2,5%	t	73,521.29				
iv. (prelim) EF:	1	Lab & Stehiometrijski	tCO2/t	0.45				
v. DOV:								
vi. OF:								
vii. PretvF:	1	PretvF=1	-	100.00%				
viii. Udio_C:								
ix. Bio_C:								
x. neodrživ. BioC:								
Razine vrijede od:			do:		Broj iz Kataloga otpada (ako je relevantno):			
					ID koji se koristio u Planu praćenja za ovaj tok izvora:		F4	
Komentari:								

MEASURING BASED METHODOLOGY

- Report sheet D and installation operator's Plan sheet F

1	N2O	M1. Dimnjak otpadnog plina 1	Ukupne emisije fosilnog porijekla:	180,621.4 t CO2e
			Ukupne emisije iz biomase:	0.0 t CO2e
			Ukupni sadržaj energije fosilnog porijekla:	TJ
			Ukupni sadržaj energije iz biomase:	TJ
(a) Proračuni			Rezultat potvrđenog proračuna (fosilnog porijekla):	
Referenca na relevantne tokove izvora, ako je primjenjivo:			Rezultat potvrđenog izračuna (biomasa):	
n.p.				
Korištena razina:	1 ± 10,0 %	i. Koncentracija stakleničkih plinova (godišnji satni prosjek):	g/Nm ³	1.0017
		ii. Udio biomase:	-	0.00%
		iii. Udio neodrž. biomase:	-	0.00%
		iv. Sati rada:	h/godina	5.972
		v. Protok dimnog plina (godišnji satni prosjek):	1000 Nm ³ /h	101.31
		vi. Protok dimnog plina (ukupni godišnji):	1000	605.065
		vii. Godišnji iznos stakleničkih plinova fosilnog porijekla	t	606
(b) Preneseni/Inherentni CO2				
i. Naziv postrojenja				
ii. Naziv operatera				
iii. Jedinstveni ID postrojenja				
iv. Vrsta prijenosa				
Komentari (npr. opis potvrđenih proračuna ili ako nedostaje značajna količina podataka):				

MISSING INFORMATION

- **sheet G of the installation operator** determined during the reporting year

	Naziv toka izvora ili druga identifikacijska oznaka	od	do	Opis, razlozi i metode	Procijenjene emisije
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

	Naziv izvora emisije ili druga identifikacijska oznaka	od	do	Opis, razlozi i metode	Procijenjene emisije (t CO2e)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

SUMMARY

- sheet I of the installation operator's Report

Sažetak Godišnjeg izvješće o emisijama stakleničkih plinova sukladno Direktivi 2003/87/EZ					
Godina izvještavanja:					
Naziv operatera:					
Naziv postrojenja:					
Jedinstveni ID postrojenja:					
Djelatnost iz Priloga I.	Ukupni kapacitet djelatnosti	Jedinice kapaciteta	Emitirani staklenički plin		
A1					
A2					
A3					
A4					
A5					
<i>Bilješke:</i>					
	Emisije (fosilne) t CO _{2e}	Sadržaj energije (fosilni) TJ	Emisije (biomasa) t CO ₂	Sadržaj energije (biomasa) TJ	Emisije (neodrživa biomasa) t CO ₂
Tokovi izvora					
Izgaranje					
Procesne emisije					
Masena bilanca					
Emisije PFC					
MJERENJE					
CO2					
N2O					
preneseni CO2					
Nadomjesni pristup					
Ukupno					
Ukupne emisije iz postrojenja:				0 t CO_{2e}	
<i>Ovo je ukupna količina emisijskih jedinica koje operater mora predati na račun.</i>					
<i>Bilješka: Ukupne emisije iz (održive) biomase</i>				0 t CO ₂	
<i>Bilješka: Ukupne emisije iz (neodržive) biomase</i>				0 t CO _{2e}	
<i>Bilješka: Prijenos CO2</i>					
<i>Preneseni CO2 postrojenja uvezen je iz</i>					
ID postrojenja	Naziv postrojenja			Naziv operatera	

OVERVIEW OF AIRCRAFT OPERATOR'S EMISSIONS

	2	3	4	5	6	7	8	9	10	11	12	14	15
5	4 Information about the monitoring plan												
6													
7	(a) Version number of the latest approved monitoring plan:		<input type="text"/>										
9	(b) Data of approval of the used monitoring plan:		<input type="text"/>										
10													
11	(c) Have there been any deviations from your approved monitoring plan during the reporting year?												
12	<input type="text"/>												
13													
14	(d) If you have answered "True", please describe all relevant changes in the operations and all deviations from your approved monitoring plan, providing information about each deviation and the consequence for the calculation of annual emissions.												
15	<input type="text"/>												
16													
17													
18													
19	5 Total emissions												
20													
21	(a) Total number of flights in the reporting year covered by the EU ETS:		<input type="text"/>										
22													
23	(b) Properties of the fuels used:												
31	Fuel No.	Name of fuel	preliminary EF [t CO2 / t fuel]	NCV [GJ/t]	biomass content [sustainable] [%]	biomass content (non- sustainable) [%]							
32	1	Jet kerosene (jet A1 or jet A)	3.15	44.10	0.00	0.00							
33	2	Jet gasoline (Jet B)	3.10	44.30	0.00	0.00							
34	3	Aviation gasoline (AvGas)	3.10	44.30	0.00	0.00							
35	4												
36	5												
37	6												
38	7												
39	8												
40	9												
41	10												
42	11												
43	12												
46													
47	(c) Fuel consumption and Emissions												
55	Fuel No.	Name of fuel	(final) EF [t CO2 / t fuel]	fuel consumption [tonnes]	CO2 emissions [t CO2]	CO2 from sustainable biomass	CO2 from non-sustainable biomass						
56	1	Jet kerosene (jet A1 or jet A)	3.15										
57	2	Jet gasoline (Jet B)	3.10										
58	3	Aviation gasoline (AvGas)	3.10										
59	4												
<p>← ... Guidelines and conditions Identification and description Emissions overview Emissions Data Aircraft Data MS specific content</p>													

AIRCRAFT OPERATOR'S EMISSIONS – CONTROL ACTIVITIES

EMISSION DATA PER COUNTRY AND FUEL						
8 Detailed emissions data						
<p>(a) The following table is used for control purposes only. Please make sure that the totals are consistent with the result of section 5(c). The following sections (b) and (c) should be filled without any double counting of emissions.</p> <p>Note: You can add more columns if you use more fuels, and more rows if you have to enter more country pairs. If you add additional cells, and/or copy and paste data from another program or worksheet, you have to add the appropriate calculation formulas and check the correctness of existing formulas. It is the full responsibility of the aircraft operator to check the correctness of calculations.</p> <p>Note: Only fossil emissions are accounted for in this section. This includes biomass emissions for which sustainability criteria have not been proven.</p>						
		Emissions from each Fuel [t CO2]				TOTAL [t CO2]
		Jet kerosene (jet A1 or jet A)	Jet gasoline (Jet B)	Aviation gasoline (AvGas)	Alternative fuel 1	<add more fuels before this column>
A	Total aggregated CO2 emissions from all flights relating to the reduced scope of the EU ETS Directive (= B + C)	0	0	0	0	0
B	of which departure MS is the same as arrival MS (domestic flights, =sum of section (b))	0	0	0	0	0
C	of which all other intra EEA flights	0	0	0	0	0
D	emissions from all flights departing from a Member State to another Member State (=sum of section (c))	0	0	0	0	0
<p>Please note that all figures should only include emissions to be reported under the EU ETS, i.e. relate to the reduced scope.</p> <p>Total emissions entered in section 5(c): <input type="text" value="0"/> t CO2</p> <p>Difference to data given in this sheet: <input type="text" value="0"/> t CO2</p>						
<p>(b) Aggregated CO2 emissions from all flights of which departure Member State is the same as arrival Member State (domestic flights):</p> <p>Please complete the following table with the appropriate data for the reporting year.</p>						
		Emissions from each Fuel [t CO2]				TOTAL [t CO2]
	Member State of departure and arrival	Jet kerosene (jet A1 or jet A)	Jet gasoline (Jet B)	Aviation gasoline (AvGas)	Alternative fuel 1	<add more fuels before this column>
24	Austria					0
25	Belgium					0
26	Bulgaria					0
27	Croatia					0
28	Cyprus					0
29	Czech Republic					0
30						0

INFORMATION DEVIATIONS BETWEEN THE EMISSION REPORT AND THE MONITORING PLAN

- **Allowed deviations – according to Regulation 601/2012**
 - In the period after the approval of the monitoring plan and before the submission of the emission report, a change that is not significant occurred (Article 15)
 - If the changes are significant, and approval of the new version of the monitoring plan has not yet been obtained (Article 16)
 - Temporary changes of the monitoring methodology (Article 23)
 - Some data missing (Article 65)



INFORMATION IN THE VERIFICATION REPORT

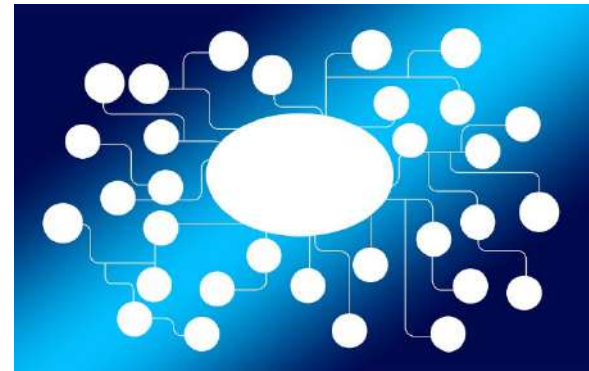
How to use this file

This verification report template comprises the following sheets which are inextricably intertwined:

<u>Opinion Statement (installation)</u>	The formal opinion document to be signed by the verifier's authorised signatory
<u>Opinion Statement (aviation)</u>	The formal opinion document to be signed by the verifier's authorised signatory
<u>Annex 1 : FINDINGS</u>	To list all remaining - uncorrected - misstatements, non-conformities and non-compliances, and the key improvement opportunities identified from the verification
<u>Annex 2 : BASIS OF WORK</u>	Background and other information of relevance to the opinion such as the criteria that control the verification process (accreditation/certification rules etc) and the criteria against which the verification is conducted (EU ETS Rules etc)
<u>Annex 3 : CHANGES</u>	A summary of any specific conditions, variations, changes or clarifications approved by or applied by the Competent Authority subsequent to the issuing of the Greenhouse Gas Permit and which have NOT been included in a re-issued permit and monitoring plan at the time of completion of verification. AND A summary of any relevant changes that the verifier identifies, and which have NOT been reported to the Competent Authority by 31 December of the reporting year.

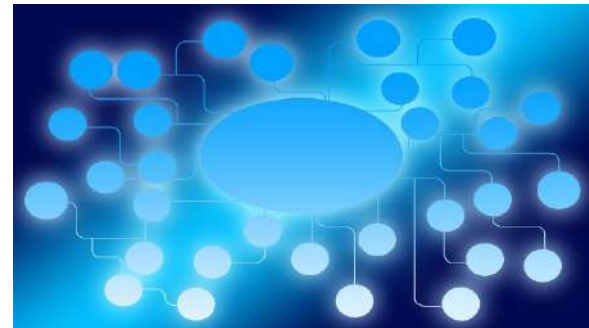
OPINIONS SHEET (INSTALLATIONS)

- **Information on the operator**
 - Name and address
 - Permit number
 - All approved versions of the monitoring plan included
- **Information on emissions**
 - Reference documents – name of the file with the emission report (date and version number)
 - Emissions (t CO₂e)
 - Source streams
 - Methodology
 - Emission factors
 - Changes at the installation during the reporting year



OPINIONS SHEET (AVIATION)

- **Information on the operator**
 - Name and address
 - Date of the approval of the monitoring plan and period of validity
- **Information on emissions**
 - Reference documents – name of the file with the emission report (date and version number)
 - Emissions (t CO₂e)
 - Tonne-kilometres
 - Methodology
 - Emission factors
 - Changes at the operator during the reporting year



OPINION

OPINION	
OPINION - verified as satisfactory:	We have conducted a verification of the greenhouse gas data [or Tonne-kilometre data] reported by the above Operator in its Annual Emissions Report [or Tonne-kilometre report] as presented above. On the basis of the verification work undertaken (see Annex 2) these data are fairly stated.
OPINION - verified with comments:	We have conducted a verification of the greenhouse gas data [or Tonne-kilometre data] reported by the above Operator in its Annual Emissions Report [or Tonne-km report] as presented above. On the basis of the verification work undertaken (see Annex 2) these data are fairly stated, with the exception of:
Comments which qualify the opinion:	1.
	2.
	3.
OPINION - not verified:	We have conducted a verification of the greenhouse gas data [or Tonne-kilometre data] reported by the above Operator in its Annual Emissions Report [or Tonne-km report] as presented above. On the basis of the work undertaken (see Annex 2) these data CANNOT be verified due to -

ANNEX 1 (FINDINGS)

- **Annex 1A - Misstatements, Non-conformities, Non-compliances and Recommended Improvements**
 - Uncorrected Misstatements that were not corrected before issuance of the verification report
 - Uncorrected Non-conformities with approved Monitoring Plan
 - Uncorrected Non-compliances with Regulation which were identified during verification
 - Recommended improvements
 - Prior year Non-conformities that have not been resolved
- **Annex 1B - Methodologies to close data gaps**
 - Conservative methodology?
 - Significant material misstatement?

ANNEX 2 AND ANNEX 3

- **Annex 2 – Basis of work**
 - Further information of relevance to the Opinion
 - Implementation of verification
 - Implementation of accreditation

- **Annex 3 - Summary of conditions / changes/ clarification / variations**
 - approved by the Competent Authority but which have not been incorporated within a re-issued Permit/ Monitoring Plan at completion of verification
 - identified by the verifier and which have not been reported by 31 December of the reporting year

INFORMATION IN THE IMPROVEMENT REPORT

Improvement Report

CONTENTS

Sheet names are given in bold font and section names in normal font.

a_Contents

b_Guidelines and conditions

A. Operator & Installation Identification

Information about the improvement report

Operator information

Contact details

B. Improvement Description

Types of improvement

Source streams and emission sources

C. Improvements related to non-conformities in the verification report

D. Improvements related to verifier's recommendations

E. Improvements related to source streams

F. Improvements related to measurement-based monitoring approaches

G. Fall-back approaches

H. Additional information

Definitions and Abbreviations

Additional information

Comments

a _Contents	b _Guidelines and conditions	A _Operator&Inst.ID	B _ImprovementD
--------------------	-------------------------------------	----------------------------	------------------------

INFORMATION ABOUT THE OPERATOR, INSTALLATION AND VERIFIER

- **Information about the improvement report**
 - Installation category
 - Improvement report submission date
- **Information about the operator**
 - Permit number
 - Information about the installation and the operator
- **Contact information**



IMPROVEMENT DESCRIPTION

- **Types of improvements**
 - Related to non-conformities and recommendations from the verification report
 - Related to periodic improvement reporting
 - Source streams
 - Measuring methodology
 - Fall-back approach
- **Source streams and emission sources for which improvements are described**
 - Source stream types and names
 - Description of measurement points
 - Greenhouse gases measured

SHEET C VERIFICATION REPORT (NON-CONFORMITIES)

18	B.	Neispravljene neusklađenosti s odobrenim planom praćenja	
19		<i>uključujući odstupanja između odobrenog plana i stvarnih izvora, protoka podataka i granica itd. – utvrđeni tijekom verifikacije</i>	Materijalno značajne?
20	B1		odaberite
21	B2		odaberite
22	B3		odaberite
23	B4		odaberite
24	B5		odaberite
25	B6		odaberite
26	B7		odaberite
27	B8		odaberite
28	B9		odaberite
29	B10		odaberite
30			
31	C.	Neispravljene nesukladnosti s Uredbom koje su utvrđene tijekom verifikacije	značajne?
32	C1		odaberite
33	C2		odaberite
34	C3		odaberite
35	C4		odaberite
36	C5		odaberite
37	C6		odaberite
38	C7		odaberite
39	C8		odaberite
40	C9		odaberite
41	C10		odaberite

Verification Report, sheet Annex 1 - Findings

21	1	i. Mjere će biti/su bile poduzete:		Kada?	
23		ii. Opis:			
24		<i>U slučaju da vam treba više mjesta za opis, možete koristiti dodatne dokumente i ovdje navesti njihovu oznaku.</i>			
25		Naziv:			
26		Opis:			
27					
28					
29					
30					
31					
32					
33					
34					
35					
36	2	i. Mjere će biti/su bile poduzete:		Kada?	
38		ii. Opis:			
39		<i>U slučaju da vam treba više mjesta za opis, možete koristiti dodatne dokumente i ovdje navesti njihovu oznaku.</i>			
40		Naziv:			
41		Opis:			
42					
43					
44					
45					
46					
47					
48					
49					

Improvement Report, sheet C
Verification Report – Non-conformities

SHEET D VERIFICATION REPORT (RECOMMENDATIONS FOR IMPROVEMENT)

43	D.	Preporučena poboljšanja, ako ih ima
44	D1	
45	D2	
46	D3	
47	D4	
48	D5	
49	D6	
50	D7	
51	D8	
52	D9	
53	D10	

Verification Report, sheet Annex 1 - Findings

27			
28	1	i. Mjere će biti/su bile poduzete:	Kada?
30		Ako mjere neće biti poduzete, zašto neće?	
31		ii. Opis:	
32		<i>U slučaju da vam treba više mjesta za opis, možete koristiti dodatne dokumente i ovdje navesti njihovu oznaku.</i>	
33		Naziv:	
34		Opis:	
35			
36			
37			
38			
39			
40			
41			
42			
43			
44	2	i. Mjere će biti/su bile poduzete:	Kada?
46		Ako mjere neće biti poduzete, zašto neće?	
47		ii. Opis:	
48		<i>U slučaju da vam treba više mjesta za opis, možete koristiti dodatne dokumente i ovdje navesti njihovu oznaku.</i>	
49		Naziv:	
50		Opis:	
51			
52			
53			
54			
55			
56			
57			
58			

Improvement Report, sheet D
Verification Report –
Recommendations for
improvement

SOURCE STREAMS

- Sheet E of the Improvement Report

1

Activity Data
or Calc.

	Factor:	Tier required:	Reason for deviation in the past:	Impact on tiers?	Measures taken:	When?	Tier applied:
i.							
ii.							
iii.							

vi. Description

In case you require more space for the description you may also use external files and reference those here.

MEASURING METHODOLOGIES

- Sheet F of the Improvement Report

1

--	--	--	--	--	--

	Tier required:	Reason for deviation in the past:	Impact on tiers?	Measures taken:	When?	Tier applied:
i.						

ii. **Description**

In case you require more space for the description you may also use external files and reference those here.

--

ADDITIONAL INFORMATION

H. Additional Information	Navigation area:	Table of contents	Previous sheet	Next sheet	
	Top of sheet	Definitions and Abbreviations	Additional Information	Comments	

H. Further Information on this report

13 List of definitions and abbreviations used

Please list any abbreviations, acronyms or definitions that you have used in completing this improvement report.

Abbreviation	Definition

14 Additional information

If you are providing any other information that you wish us to take into account in considering your report, tell us here. Please provide this information in an electronic format wherever possible. You can provide information as Microsoft Word, Excel, or Adobe Acrobat formats.

You are advised to avoid supplying non-relevant information as it can slow down the process. Additional documentation provided should be clearly referenced below, using file name(s) (if in an electronic format) or document reference number(s) (if hard copy). If needed, check with your competent authority.

File name/Reference	Document description

INFORMATION ON THE CHANGES TO CAPACITY, LEVEL OF ACTIVITY, OPERATION OF THE INSTALLATION (1)

- **Request for change of emission allowances allocated for free**
 - significant increase or decrease of installation's capacity
 - partial cessation of operations
 - subsequent increase of level of activity
- **Request structure- work sheets**



INFORMATION ON THE CHANGES TO CAPACITY, LEVEL OF ACTIVITY, OPERATION OF THE INSTALLATION (2)

A. Information about the installation

- Installation identification
- Information about the request
- Initially allocated emission allowances
- Current request description
- Determination of the starting installed capacity
- List of technical connections

B. Partial cessation of operations

- Determination of corrective factors for partial cessation of operations

C. Start of operations

- Determination of the beginning of normal or changed operations

INFORMATION ON THE CHANGES TO CAPACITY, LEVEL OF ACTIVITY, OPERATION OF THE INSTALLATION (3)

D. Emissions

- Total greenhouse gas direct emissions and energy input from fuel
- Attribution of emission to sub-installations
- Waste gases

E. Flows of energy

- Energy input through fuel
- Measurable heat
- Electricity

F. Information about sub-installations related to reference values for a product

- Historical activity levels and production details

INFORMATION ON THE CHANGES TO CAPACITY, LEVEL OF ACTIVITY, OPERATION OF THE INSTALLATION (4)

K. Summary

- **Review of most important information**
 - Information on the installation
 - Applicability for free allocation and cessation of operations
 - Emissions and flows of energy
 - Information about a sub-installation relevant for the purposes of allocation of emission allowances
 - Calculation of annual amount of emission allowances allocated for free





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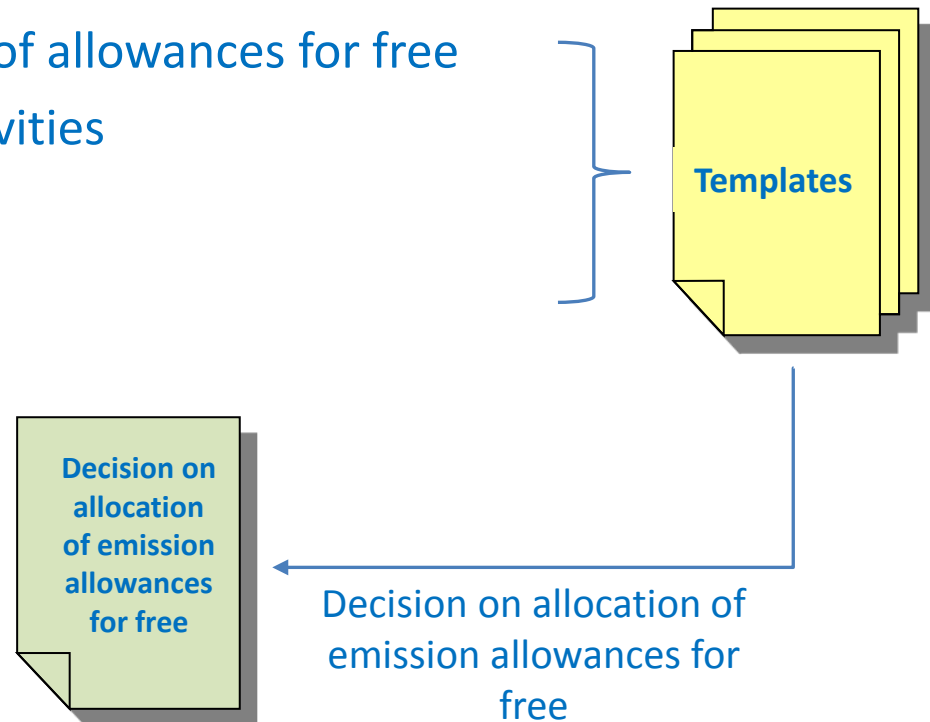
USING INFORMATION FROM KEY ACTS OF THE EMISSIONS TRADING SYSTEM

CONTENTS

- **Decision on allocation of emission allowances for free**
- **Decision on modification of the Greenhouse Gas Emission Permit**
- **Decision on revocation of the Greenhouse Gas Emission Permit**

DECISION ON ALLOCATION OF EMISSION ALLOWANCES FOR FREE

- **request of the installation operator/aircraft operator for allocation of emission allowances for free**
 - Request for allocation of allowances for free
 - Information about activities
 - Methodology Report
 - Verification Report



CONTENT OF THE DECISION

- **Information about the competent authority issuing the decision**
- **Information about the operator**
 - Name, PIN and address of the operator
 - Information about the person representing the operator
- **Information about the emission allowances allocated free of charge**
 - Amount of emission allowances allocated free of charge
 - Year for which the Decision is issued and the emission allowance trading period



OBLIGATIONS OF THE OPERATOR

- **submission of the amount of emission allowances to the Union Registry**
 - corresponds to verified total greenhouse gas emissions
- **paying a fee for the difference between the greenhouse gas emissions emitted from an installation/aircraft for which the operator did not submit emission allowances**
 - to the Fund for Environmental Protection and Energy Efficiency
- **notification to the competent authority**
 - about planned changes to operation
 - about status changes



EXPLANATIONS AND INFORMATION

- **explanation of the submitted request**
 - class, register number and date
 - name and address of the operator
 - list of documentation being submitted in written and electronic format
- **information about the Greenhouse Gas Emission Permit**
 - permit class, register number and date
 - information about the Emission Monitoring Plan – version number
 - information on documentation rewriting, if it is necessary – submission in electronic format
- **information about planned or actual changes to capacity, activity level and operation of the installation**

DECISION ON MODIFICATION OF THE GREENHOUSE GAS EMISSION PERMIT

Content:

- **information about the competent authority issuing the Decision**
- **information about the operator**
 - name, PIN and address of the operator
 - person representing the operator
 - activity according to Annex I of the Regulation on the Method of Greenhouse Gas Emission Allowance Trading
- **explanation of the Permit modification**
 - class, register number and date of the modification
 - description and reason for modification



DECISION ON REVOCATION OF THE GREENHOUSE GAS EMISSION PERMIT

Content:

- **information about the competent authority issuing the Decision**
- **information about the operator**
 - name, PIN and address of the operator
 - person representing the operator
- **information about the revocation of the Permit**
 - class, register number and date of Permit being revoked
 - activity according to Annex I of the Regulation on the Method of Greenhouse Gas Emission Allowance Trading



OBLIGATIONS OF THE OPERATOR

- **drafting the Emission Report**
 - from the beginning of the year to the enforceability of the Decision
- **submitting the verified Emission Report to the Agency**
 - within two months of the enforceability of the Decision
- **implementing measures to achieve equivalent contribution to reduction of greenhouse gas emissions**
 - from the beginning of the year to the enforceability of the Decision
- **paying an annual greenhouse gas emission fee**
- **operator is not allocated free emission allowances**

EXPLANATION OF PERMIT REVOCATION

- **information:**

- class, register number and date of the Greenhouse Gas Emission Permit
- class, register number and date of the Decision on exclusion from the emission allowance trading system
- description of changes to the installation/aviation activities submitted to the competent authority
- information about a conducted inspection
- information about the operator's obligations





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OTHER INFORMATION

CONTENTS

- **Fee payment to FZOEU (Fund for Environmental Protection and Energy Efficiency) by excluded installations**
- **Status of the verified Emission Report**
- **Review of the Baseline Data Report and the Methodology Report (NIMs)**
- **Using information from the Questionnaire on the implementation of Directive 2003/87/EC**

FEE PAYMENT TO FZOEU BY EXCLUDED INSTALLATIONS (1)

- **measures for achievement of equivalent contribution to reduction of greenhouse gases**
- **special annual fee for greenhouse gas emissions**
 - Article 2 of the Act on Amendments to the FZOEU Act (OG 144/12)
 - Article 10 of the Regulation (OG 69/23, 154/14) – fee determination:
 - Fee amount x (verified emission – free allowance emission)
 - Minister for Environmental Protection issues a decision on the unit fee amount for the previous year by March 31
 - In accordance with the emission allowance average market price in the previous year



FEE PAYMENT TO FZOEU BY EXCLUDED INSTALLATIONS(2)

- the Fund's authority to hold emission allowance auctions
- funds of the Fund are used to buy allowances of allocated quotas and allowances resulting from implementation of project activities
 - compliance with the Kyoto Protocol



STATUS OF THE VERIFIED EMISSIONS REPORT (1)

Verification Report – Opinion sheet

- **OPINION - verified**
 - conducted verification of data reported in the annual Report
 - these data are fairly stated
- **OPINION – verified with comments**
 - conducted verification of data reported in the annual Report
 - these data are fairly stated
 - opinions with stated non-material misstatements, non-conformities and non-compliances - summary
- **OPINION – not verified**
 - conducted verification of data reported in the annual Report
 - data cannot be verified- list a reason

STATUS OF THE VERIFIED EMISSIONS REPORT (2)

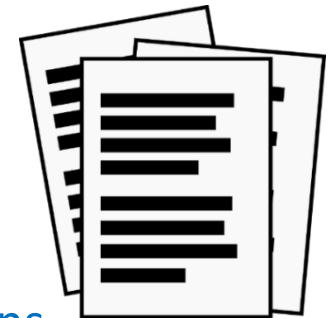
Comments :

- non-material misstatements in the Emissions Report
- non-conformities with the Greenhouse Gas Emissions Permit or the valid approved Emissions Monitoring Plan which did not lead to a negative Verification Report
- non-compliance with Regulation 601/2012
- recommendations for improvement

<p>OPINION - verified as satisfactory:</p>	<p>We have conducted a verification of the greenhouse gas data reported by the above Operator in its Annual Emissions Report as presented above. On the basis of the verification work undertaken (see Annex 2) these data are fairly stated.</p>
<p>OPINION - verified with comments:</p>	<p>We have conducted a verification of the greenhouse gas data reported by the above Operator in its Annual Emissions Report as presented above. On the basis of the verification work undertaken (see Annex 2) these data are fairly stated, with the exception of:</p>
<p>Comments which qualify the opinion:</p>	<p>1.</p> <p>2.</p> <p>3.</p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p>
<p>OPINION - not verified:</p>	<p>We have conducted a verification of the greenhouse gas data reported by the above Operator in its Annual Emissions Report as presented above. On the basis of the work undertaken (see Annex 2) these data</p>

REVIEW OF THE BASELINE DATA REPORT AND THE METHODOLOGY REPORT (NIMs)

- **national implementation measures (NIMs)**
 - rules for allocation of free emission allowances – pursuant to Article 10a of the Directive 2003/87/EC
 - data on the level of the installation and sub-installation of the operator
 - reference period (2005 - 2008 or 2009 - 2010)
 - calculation of the amount of free emission allowances to be allocated from 2013 on
- **overview of key data template**
 - template for baseline NIM data collection
- **Data Collection Methodology Report template**
 - comprehensive list of information
 - implementation of monitoring and reporting regulations



BASELINE DATA REPORT (1)

BASELINE DATA REPORT

CONTENTS

- [GUIDELINES AND CONDITIONS](#)
- A. **Sheet "InstallationData" - GENERAL INFORMATION ON THIS REPORT**
 - I [Identification of the Installation](#)
 - II [Information on this baseline data report](#)
 - III [List of sub-installations](#)
 - IV [List of technical connections](#)
- B. **Sheet "SourceStreams(I)" - SOURCE STREAM DATA, EMISSIONS AND ENERGY INPUT DATA**
Part I - Fuels and Process emissions
 - I [Guidance for Source stream data](#)
 - II [Fuels](#)
 - III [Process emissions](#)
- C. **Sheet "SourceStreams(II)" - SOURCE STREAM DATA, EMISSIONS AND ENERGY INPUT DATA**
Part II - Mass balances, CEMS, N2O, PFC, transferred CO2
 - I [Mass balances](#)
 - II [CEMS \(Continuous Emission Monitoring Systems\) for CO2 emissions](#)
 - III [Nitrous Oxide Emissions \(N2O\)](#)
 - IV [Perfluorocarbons \(PFC\)](#)
 - V [Transferred or stored CO2](#)
- D. **Sheet "Emissions" - ATTRIBUTION OF EMISSIONS**
 - I [Total Direct Greenhouse Gas Emissions and Energy Input from Fuels](#)
 - II [Attribution of emissions to sub-installations](#)

▶	a_Contents	b_Guidelines & conditions	A_InstallationData	B_SourceStreams(I)	C_SourceStream:
---	-------------------	---------------------------	---------------------------	--------------------	-----------------

OVERVIEW OF BASELINE DATA (2)

A. Installation data

- identification of the installation, list of sub-installations and technical connections

B. Source streams

- source streams, fuel, process emissions

C. Source streams II

- part II – mass balances, CEMS (continuous emission monitoring systems) for CO₂, N₂O emissions, PFC emissions, transferred CO₂

D. Emissions

- total direct greenhouse gas emissions and energy input from fuels, attribution of emissions to sub-installations, waste gases

E. Energy flows

- Energy input from fuels, measurable heat, electricity

OVERVIEW OF BASELINE DATA (3)

F. Product BM

- sub-installation data relating to product benchmarks

G. Fall-back approach

- data on sub-installations with a fall-back approach

H. Energy flows

- special data for some product benchmarks

I. Member State specific

- additional data – required by the Member State

J. Comments

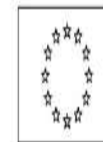
K. Summary

- overview of most important data

METHODOLOGY REPORT TEMPLATE FOR DATA COLLECTION

CONTENTS:

1. Installation data and boundaries
2. Source streams
3. Product benchmark sub-installations
4. Heat benchmark sub-installations
5. Fuel benchmark sub-installations
6. Process emissions sub-installations
7. Waste gases
8. Electricity
9. Technical connections
10. Data collection and data quality management



EUROPEAN COMMISSION
DIRECTORATE-GENERAL
CLIMATE ACTION
Directorate B - European and International Carbon Markets

Name of the installation:	
Unique ID (as generated by the reporting template in section A.1.1.f):	

Methodology report template for the data collection

Final version issued on 14/04/2011

USING DATA FROM THE QUESTIONNAIRE ON THE IMPLEMENTATION OF DIRECTIVE 2003/87/EC (1)

- **Article 21 Paragraph 1 of Directive 2003/87/EC**
 - Each year the Member States shall submit to the Commission a report on the application of the Directive
 - EC prescribes the template (*Article 21 Questionnaire*)
- **Article 20 Paragraph 1 of Regulation 69/12, 154/14**
 - prescribes the obligation of submitting a report to the Commission
 - MEPE submits the report by June 30 for the previous year

UPITNIK O PRIMJENI DIREKTIVE 2003/87/EZ	
Reporting language	hr
Reporting year	2015
This is the official report	
1. Pojednosti o instituciji koja podnosi izvješće	
Naziv ustanove i odjel:	Ministarstvo zaštite okoliša i prirode
Ime osobe za kontakt:	Madlena Ozanić
Službena funkcija osobe za kontakt:	viša stručna savjetnica
Adresa:	Radnička cesta 80
Broj telefona za međunarodne pozive:	+385 1 3717136
E-mail adresa:	Madlena.Ozanic@mzoip.hr
2. Nadležna tijela u sustavu trgovanja emisijskim jedinicama stakleničkih plinova (EU ETS) i koordinacija među tijelima	
<small>Odgovore na pitanja iz ovog odjeljka treba dati u izvješću koje se predaje do 30. lipnja 2014. te u naknadnim izvješćima ako je u tijeku izvješćnog razdoblja došlo do promjene.</small>	

USING DATA FROM THE QUESTIONNAIRE ON THE IMPLEMENTATION OF DIRECTIVE 2003/87/EC (2)

- **the report provides information on the implementation of the system**
- **regarding planning an inspection – examples of information**
 - item 5.8: „Are you aware of any special problems or issues regarding sampling plans made by operators? YES/NO”
 - item 5.10: „If highest levels of access for main source streams of category C installations... Are not applied, state...”
 - item 6.3: „For which installations did the competent authority do a conservative estimation of emissions...?”
- **communication between authorities can be two-way**
 - inspection can inform the competent authorities about irregularities

USING DATA FROM THE QUESTIONNAIRE ON THE IMPLEMENTATION OF DIRECTIVE 2003/87/EC (3)

Trading system indicators in a Member State

- **information about the institution submitting the report**
 - name, name and function of the contact person, address and other contact information
- **competent authorities in the emission allowance trading system and coordination between authorities**
 - name, acronym, contact information
 - responsibility of individual competent authorities
 - central body
 - coordination of activities



USING DATA FROM THE QUESTIONNAIRE ON THE IMPLEMENTATION OF DIRECTIVE 2003/87/EC (4)

- **comprehension of activities, installations and aircraft operators**

INSTALLATIONS

- number of installations – low emission, category A, B, C
- activities from Annex I of the Directive for which permits have been issued
- temporary exclusion of an installation

AIRCRAFT OPERATORS

- number and type of operators performing activities from Annex I of the Directive

- **issuing permits for installations**

- integration of the Greenhouse Gas Emissions Permit (ETS Permit) and the permit from the Directive on industrial emissions 2010/75/EU (IED Permit)
- Air Protection Act provisions related to ETS Permit modifications

USING DATA FROM THE QUESTIONNAIRE ON THE IMPLEMENTATION OF DIRECTIVE 2003/87/EC (5)

- **application of monitoring and reporting regulations**
 - other reporting mechanisms – greenhouse gas inventory
- **verification mechanisms**
 - number and types of comments about emissions that verifiers noted in verification reports
- **emission allowance allocation**
 - number and types of changes at installations
 - number of emission allowances corresponding to changes
- **fees**
- **compliance with the Directive**
 - measures undertaken – inspection of implementation and compliance with the monitoring plan, prohibition of sale of emission allowances in case of irregularities ...
- **fraud**





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SUPERVISION SIMULATION IN FACILITY

CONTENT

- **Exercise description**
- **Task**
- **Conducting exercise**
- **Overview**



EXERCISE DESCRIPTION

- **Working in groups**
- **Each group will receive printed copies of completed forms and reports of the simulated facility**
- **The purpose of the exercise is to carry out supervision in the simulated facility according to the instructions given during the training**



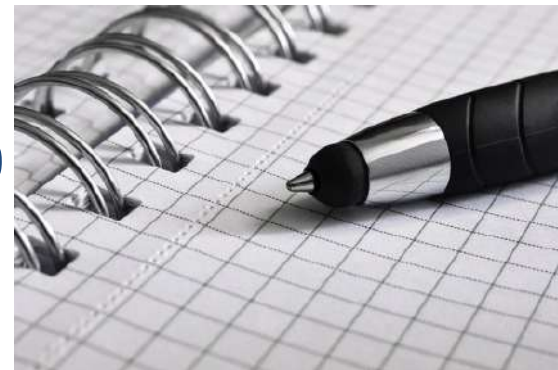
TASK (1)

- Carry out a part of the supervision process based on the distributed documentation
- Find irregularities in the documentation by analyzing the obtained information
- Write down the identified irregularities and present them at the end of the exercise



TASK (2)

- **Exercise Part 1- from 13.30 to 15.00**
 - greenhouse gas emission permit
 - emission monitoring plan
 - emission report
- **Exercise Part 2- from 15.30 to 17.00**
 - verification report
 - report on improvements



EXERCISE



COFFEE BREAK



EXERCISE



REVIEW OF EXERCISE RESULTS-OVERVIEW

- An overview of the supervision simulation results at the facility





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LIST OF IRREGULARITIES TO BE IDENTIFIED IN THE SUPERVISION SIMULATION

EMISSION MONITORING PLAN

	IRREGULARITIES
1.	The order number of the case does not correspond to the date of the permit.
2.	On the list of measuring instruments (Section 7b) the bandwidth is specified, but it is not used to determine emissions.
3.	There are no entries for the procedure definition (Section 7f, 7h, 7i, 7j).
4.	F1, F3 and F4 streams (Section 8) did not use the required level of accuracy, but the explanation states that the required accuracy levels have been applied.
5.	For source stream F4 (Section 8) it is stated that for calculating NCV and EF the L3 and L4 analyzes were used, which are defined to determine the NCV and EF of coal.

EMISSION REPORT (1)

	IRREGULARITIES
1.	The name of the operator (Section 2d) and the facility (Section 3a) is specified differently than in the permit and tracking plan.
2.	The name of the authorized representative (Section 2d) differs from the name of the person specified in the greenhouse gas emissions permit.
3.	Different version of the approved monitoring plan is provided (Section 3e), rather than the actual version and version specified in the permit.
4.	Only the activity of cement clinker production (Section 6) has been mentioned, and fuel combustion activities are not specified, as defined in the monitoring plan and in the permit.
5.	Source stream order (Section 7b and 8) does not match the order in the monitoring plan.



EMISSION REPORT (2)

	IRREGULARITIES
6.	Name of source stream F4 (Section 7b and 8) does not match the name in the monitoring plan.
7.	In the list of source streams (Section 7b) the new stream F6 is stated which is not defined in the monitoring plan.
8.	Accuracy level of NCV (Level 2a) for source stream F2 Brown coal (Section 8) differs from the level defined in the monitoring plan (Level 3).
9.	For source stream F3 Natural gas (Section 8) it has not been specified since when does the displayed accuracy level apply.
10.	For source stream F5 it is stated that activity data is determined by stock method (Section 8), and in the monitoring plan it is specified that this data is determined continuously.

VERIFICATION REPORT (1)

	IRREGULARITIES
1.	The identification number of the plant ("OPERATOR DATA") is different from the number in the monitoring plan and the emissions report.
2.	Only the activity of cement clinker production ("OPERATOR DATA") is specified, and fuel combustion activities are not specified, as defined in the monitoring plan and in the permit.
3.	It is stated that the monitoring plan is implemented („EU ETS RULES"), although there are non-compliance of reports with the monitoring plan.

VERIFICATION REPORT (2)

	IRREGULARITIES
4.	It was stated that the terms of the permit were met ("EU ETS RULES"), although the name of the operator is not the same as in the permit and the activities listed in Annex I of Decree 69/12, 154/14 are not correctly mentioned.
5.	A positive opinion on the emissions report was issued ("OPINION"), although it has been established that there are material inaccuracies.
6.	There is a non-compliance with the approved monitoring plan for petroleum coke (Annex 1, point B), although such source stream does not exist in the facility.



IMPROVEMENTS REPORT

	IRREGULARITIES
1.	The name of the operator (Section 2d) is stated different than in the permit and in the monitoring plan.
2.	The correct number of emission permit (Section 2c) is not specified.
3.	No description of measure 1 for eliminating non-compliance (Section 8) is not defined.
4.	According to the Verifier Report for Improvement, the deadline (Section 9) for when the Measure 1 has to be undertaken is not specified.





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