

Workshop on Implementation of BAT Conclusions for Waste Incineration

Puzzle piece 1: NOC/OTNOC issue

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The NOC-OTNOC-EOT issue

- IED requests compliance with ELVs in NOC on one hand and within the R-EOT on the other one
- Definitions of NOC-OTNOC-EOT
- Missing information
- General proposals for implementation and compliance



IED, chapters I et II	IED, Annex VI
<p>General rule (for all sectors covered by IED)</p> <ul style="list-style-type: none">- Article 3(13) : BATAELs defined in NOC- Article 15.3 : set ELVs ensuring that: Emissions do not exceed BATAELs in NOC	<p>Specific rule for incineration for substances continuously monitored</p> <ul style="list-style-type: none">- Annex VI, Part 8 1.2 : ELV to comply with <u>within the R-EOT</u> (except when burner is in operation and no waste is combusted) <p>NB: For periodic measurement: compliance only in NOC</p>

Consequences

<p>EIPPCB required the operators to report the OTNOC situations on 17,520 Excel rows (½-hr values over 1 year) for each continuously monitored substance,</p> <ul style="list-style-type: none">- This was done by hand since the information was not available (because useless up to now)	<p>2 sets of ELVs necessary for continuous measurts.:</p> <ul style="list-style-type: none">- BATAEL-based ELVs for NOC situations- IED Annex VI ELVs for R-EOT (NOC & some OTNOC) situations <p>Need to distinguish NOC from OTNOC situations</p>
<p>EIPPCB filtered out the values in OTNOC</p> <ol style="list-style-type: none">1) Reported by the operators2) Supposed by them (using miscellaneous filters)	<p>Risk that certain authorities require BATAELs-based ELVs also in OTNOC (R-EOT).</p> <ul style="list-style-type: none">• <i>R-EOT: Relevant-Effective Operating Time</i>• <i>NOC: Normal Operation Conditions</i>• <i>OTNOC: Other Than Normal Operation Conditions</i>• <i>ELV: Emission Limit Value</i>



Regulatory requirements on compliance either in NOC or within the R-EOT for the different air ELVs

<u>Monitoring regime</u>	<u>Period</u>	<u>Substances</u>	<u>BATAEL-based ELVs</u>	<u>IED Annex VI ELVs</u>
Continuous	Daily average	Dust, HCl, HF, SO ₂ , NO _x , TOC, CO	In NOC	In R-EOT (NOC & OTNOC when waste burning)
	Daily average	Hg*, NH ₃	In NOC	-
	½-hr average	Dust, HCl, HF*, SO ₂ , NO _x , TOC, CO**	-	In R-EOT (NOC & OTNOC when waste burning)
	10-min average	CO**	-	In R-EOT (NOC & OTNOC when waste burning)
Long term sampling	2-4 weeks, 1 month	PCDD/F + PCB-DL*	In NOC	-
		PCDD/F*	In NOC	-
		Hg*	In NOC	-
Periodic		Hg*	In NOC	In NOC
	Every 6 months	Heavy metals, PCDD/F	In NOC	In NOC
		PCDD/F + PCB-DL*	In NOC	-

* Conditional/Optional (See BATAEL tables in Session 4 above) ** CO: IED Annex IV either ½-hr or 10-min

The EOT includes most OTNOC situations (in addition to all NOC situations)

No definition of NOC and OTNOC.
Just lists of examples of OTNOC.

Compliance with BATAEL-based ELVs
not required in

OTNOCs

Compliance with continuous Annex VI ELVs required
for incinerators as well in

R-EOT

According to IED,
Articles
14.1.f
and 47

1. Start-up & Shut-down periods
2. Leaks
3. Malfunctions
 - of process equipment including abatement system
 - of measuring equipment
4. Momentary stoppages
5. Definitive cessation of operations
6. Breakdown
7. Bypassing of abatement systems
8. Regular maintenance
9. Exceptional conditions

According to Guidelines
(Decision 2012/119/EU)
in § 4.6.2.2.3.ii
and § 5.4.7.2.6

1. Start-up (ONLY 2nd phase, with waste) & Shut-down (ONLY 1st phase)
2. Leaks
3. Malfunctions
 - of process equipment including abatement system
 - of measuring equipment
4. ~~Momentary stoppages~~
5. ~~Definitive cessation of operations~~
6. Breakdown
7. Bypassing of abatement systems
8. Regular maintenance
9. Exceptional conditions

- **OTNOC:** Other Than Normal Operating Conditions - **ELVs:** Emission LIMIT Values
- **R-EOT:** Relevant-Effective Operating Time

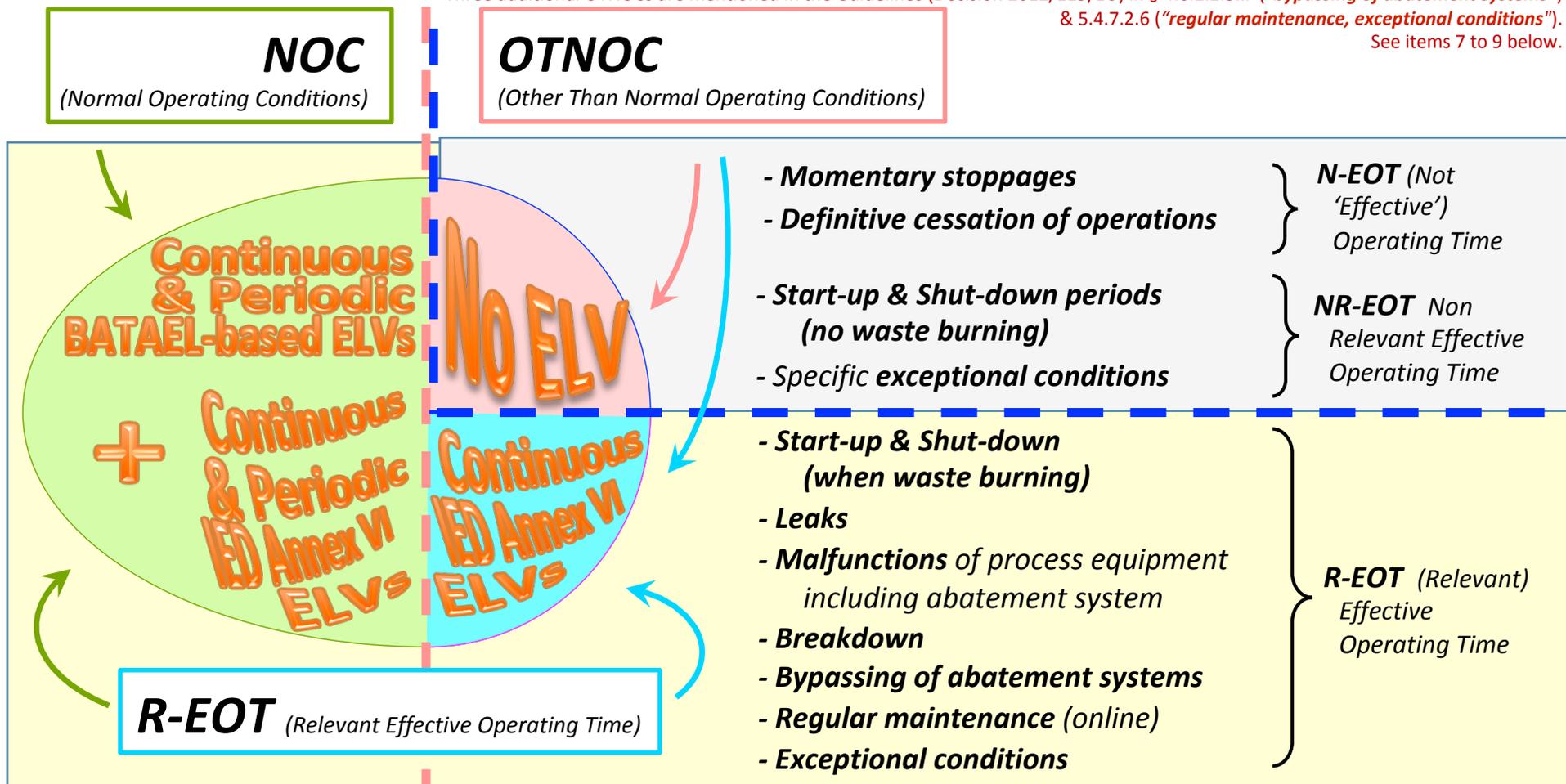


The R-EOT includes NOC and some OTNOC situations.

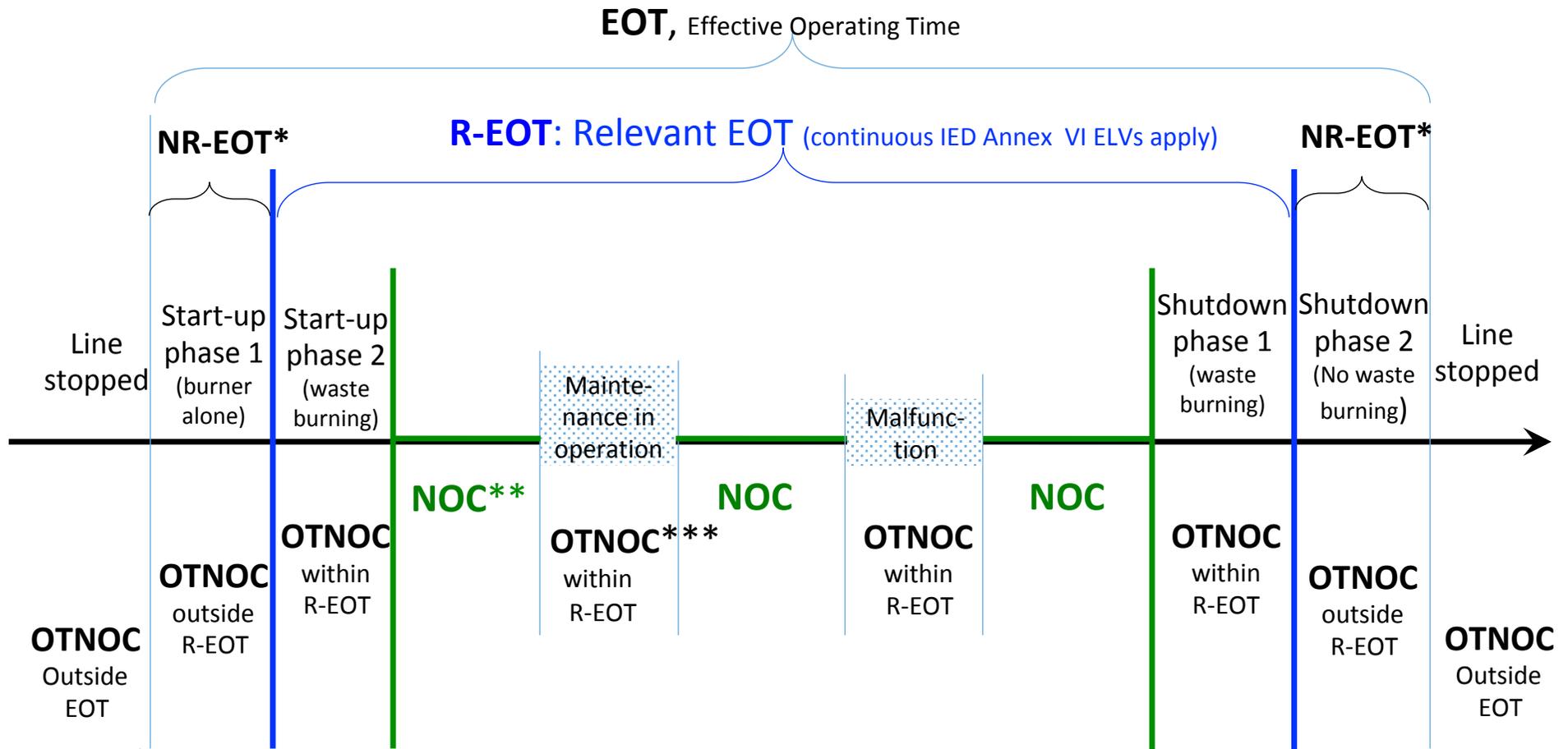
BATAEL-based ELVs are applicable in NOC

A non exhaustive list of OTNOC is given in IED, Article 14.1.f. (OTNOC “such as **start-up and shut-down operations, leaks, malfunctions, momentary stoppages and definitive cessation of operations**”) and in Article 47 (“In the case of a **breakdown**, the operator shall reduce or close down operations as soon as practicable until (NOC) can be restored”). See Items 1 to 6 below.

Three additional OTNOCs are mentioned in the Guidelines (Decision 2012/119/EU) in § 4.6.2.2.3.ii (“**bypassing of abatement systems**”) & 5.4.7.2.6 (“**regular maintenance, exceptional conditions**”). See items 7 to 9 below.



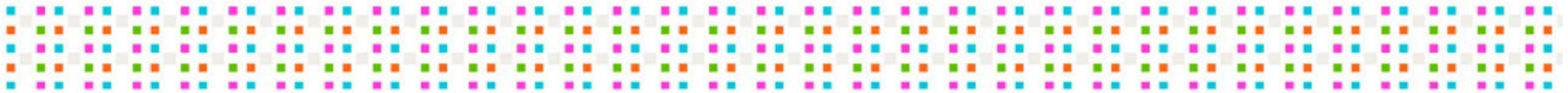
OTNOC and NOC situations within the EOT (chronologically)



* NR-EOT: Non relevant EOT (continuous IED Annex VI ELVs do not apply)

** NOC: Normal Operating Conditions (BATAEL-based ELVs apply)

*** OTNOC: Other Than Normal Operating Conditions (BATAEL-based ELVs do not apply)



Missing in the draft WI BREF BAT conclusions

- The BAT conclusions do not include

- The mention that

- BATAELs are set in NOC
- BATAEL-based ELVs should be set in NOC

- The clear definitions of NOC and OTNOC

(criteria to switch from one to the other during operation)

- The calculation rules, e.g.:

- The rules to calculate a daily average in NOC e.g. when some ½-hr average values of the day were in OTNOC
- The maximum number of non valid points in a day, etc.

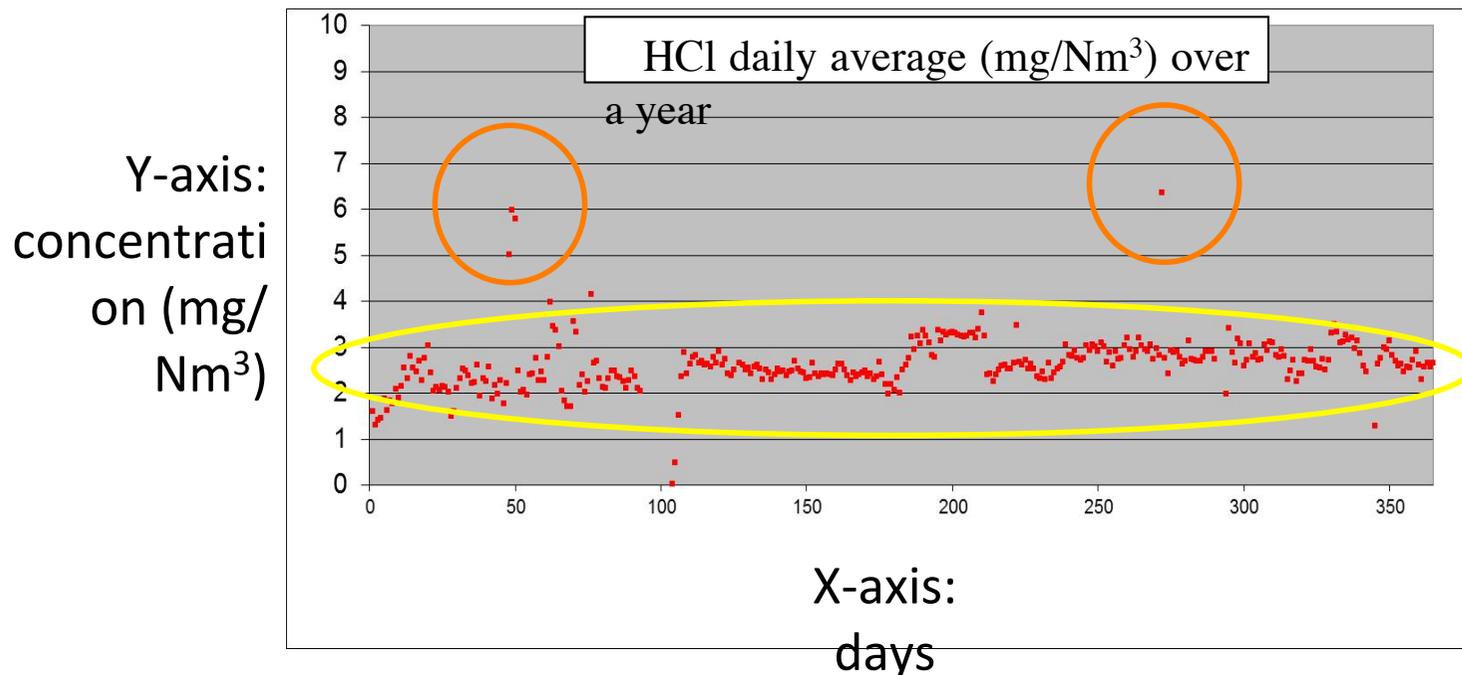
- The fact that ½-hr BATAELs of 2006 WI BREF do not apply

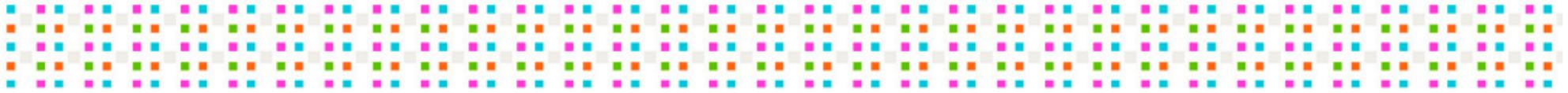
- The fact that continuous sampling is usually performed in R-EOT (and not in NOC)

- *NOC: Normal Operating Conditions*
- *OTNOC: Other Than Normal Operating Conditions*
- *BATAELs: BAT Associated Emission Levels*
- *ELVs: Emission Limit Values*

The nature of BATAELs changed between IPPC and IED

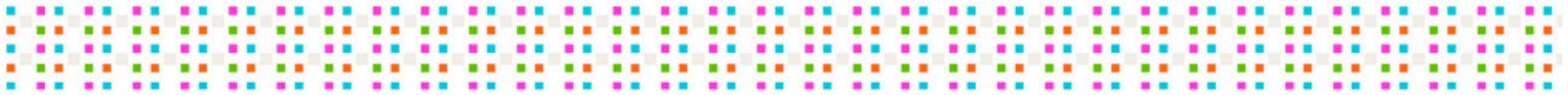
- **Former** BATAELs (under IPPC) were **typical** values. See yellow oval.
- **New** BATAELs are **capping** values. They should be based on maximum daily average values of the year in NOC. See orange circles.
- **Former BATAELs should not be used under IED.**
 - Important because no new BATAELs for ½-hr averages in the revised WI BREF





Proposals 1

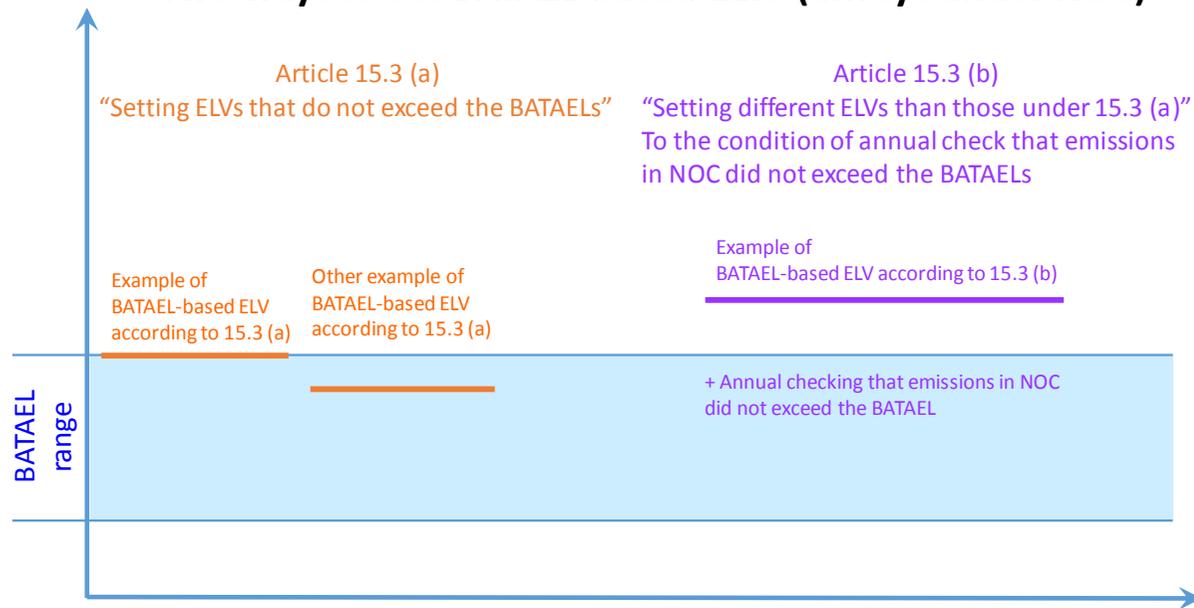
- **Definition of OTNOCs**
 - To use the list given in the IED and in the BREF drawing up Guidance (Decision 2012/119/EU)
 - To use the same rules as EIPPCB when filtering out the reported data
 - To define end of start-up as when reaching stable state as for LCPs
 - To use control system signals (alarms) to automatically identify OTNOCs and NOC for both:
 - Calculating average values in NOC
 - OTNOC Management Plan (see BAT-c 18)
- **Calculation of daily average values in NOC**
 - Use the same rules as EIPPCB when processing the reported data

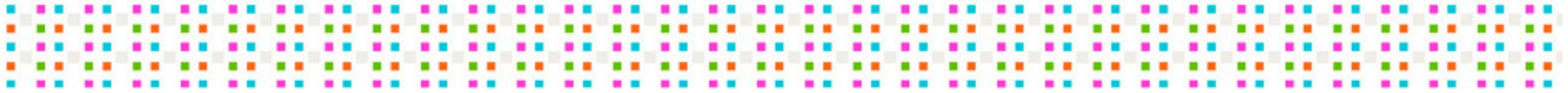


Proposals 2

- ELVs setting and checking
 - No 1/2-hr BATAEL-based ELVs, as said the EIPPCB
 - Using Article 15.3 (b) for assessment of capacity to meet BAT performances, including non exceedance of daily and periodic BATAELs

Two ways to set BATAEL-based ELVs (always under NOC)





Thank you!

Questions?