65th CIMAC WG 5 - Reports on Regulary Developments – Stationary Power Plants

Shanghai/ China

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Abbrevations:

BREF	Best available Reference Techniques Reference document
DF	Dual Fuel (low pressure gas) engine
EU	European Union
GD	(high pressure gas) Gas Diesel engine
KoM	Kick-off Meeting
LCP	Large Combustion Plant
MCP(D)	Medium Combustion Plant (Directive)
MIS	Micro Isolated Systems
SG	Spark plug or by other device ignited gas engine
SIS	Small Isolated Systems
WG	Working Group

EU MCPD (Medium Combustion Plant Directive) 2015/2193

≥ 1 …. < 50 MWth plant

Reference point for engines 15 vol-% O_2

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015L2193&from=EN

Introduction

MCPD 2015/2193 was published in the EU Official Journal (OJ) 28.11 **2015**

All EU Member States have **transposed** MCPD 2015/2193 into national law

(National transpositions at: http://eur-lex.europa.eu/legal-content/EN/NIM/?uri=uriserv:OJ.L_.2015.313.01.0001.01.ENG **)**

"**Review**" Article 12:

1. By 1 January 2020, the Commission shall review progress in relation to the **energy efficiency** of medium combustion plants and assess the benefits of setting minimum energy efficiency standards in line with best available techniques.

2. By 1 January 2023, the Commission shall assess the need to review the provisions concerning **plants which are part of SIS or MIS, as well as Part 2 of Annex II**, on the basis of state-of-the-art technologies. ("Annex II part 2" = new plant emission limits.)

As part of this review, the Commission shall also assess whether for certain or all types of medium combustion plants there **is a need to regulate CO emissions**.

Objectives of the MCP information exchange 2018 - 2019

The overall objective of this information exchange was to provide support to the Commission **to enable it to meet its obligations related to Articles 6(10)* and 12** of the MCPD**. The core element of the initiative was to analyse updated information on the environmental performance and costs of technologies to reduce emissions from MCPs. These include best available and emerging technologies.

**Article 6(10): "The Commission shall organise an exchange of information with Member States, the industries concerned and non-governmental organisations on the emission levels achievable with best available and emerging technologies and the related costs. "*

***Article 12: See previous slide*

MCPD Information Exchange Process: Milestones 2018 - 2019

Step	MCP information exchange milestone	Actual / forecast dates
1	Activation of WG: expressions of interest from interested parties and decisions on WG composition	January 2018
2	Dissemination of background paper for KoM	February 2018
3	KoM of the WG	6 March 2018
4	Design of the questionnaires	March 2018
5	Collection of information and data	Deadline August 2018
6	First draft technology report	March 2019
7	WG consultation	April-May 2019
8	Final draft technology report	mid May 2019
9	Final meeting	23 May 2019
10	Final technology report taking into account feedback received on the first draft	15 July 2019

26.09-19 Final Technology Report Issued !

Main Activities 2019

12.04 2019:

- 2. Draft MCPD Info Exchange Report published. **Deadline for feedback 08.05 2019**.

- Ricardo obtained in totally 742 comments (of which 92 from Euromot).

23.05 2019:

- Final MCPD Meeting (telecom)

31.07 2019:

- Final Technology Report MCP Information Exchange published

26.09 2019:

- *Revised* Final Technology Report MCP Information Exchange published

Final Technology Report MCP Information Exchage Main Highlights 1/2

- **Prime mover technologies handled: boiler, gas turbine, reciprocating engine**

- **Reference reciprocating engine plants (per fuel type)**:
  - *Gas oil:* 10; *Other liquid fuel*: 6; *natural gas*: 35; *other gaseous fuel*: 11

- **6 or more sample points** threshold for analysis of the main pollution compound/efficiency.
  - *Dust, SO_2, NOx, CO, efficiency measurement results reported*. See Annex 1 example.

  - Some emission compound with < 6 points anyway analysed and included e.g. dust for natural gas engine **despite** engine industry informed *that these are erroneous data*!

- **Primary and secondary emission BAT abatement techniques described** (LCP BREF 2017 one main source referred to). In emission graphs mentioned used abatement techniques. *Unfortunately* in some graphs for the emission values are missing information about the used emission abatement technique, see Annex 2 example.

Final Technology Report MCP Information Exchage Main Highlights 2/2

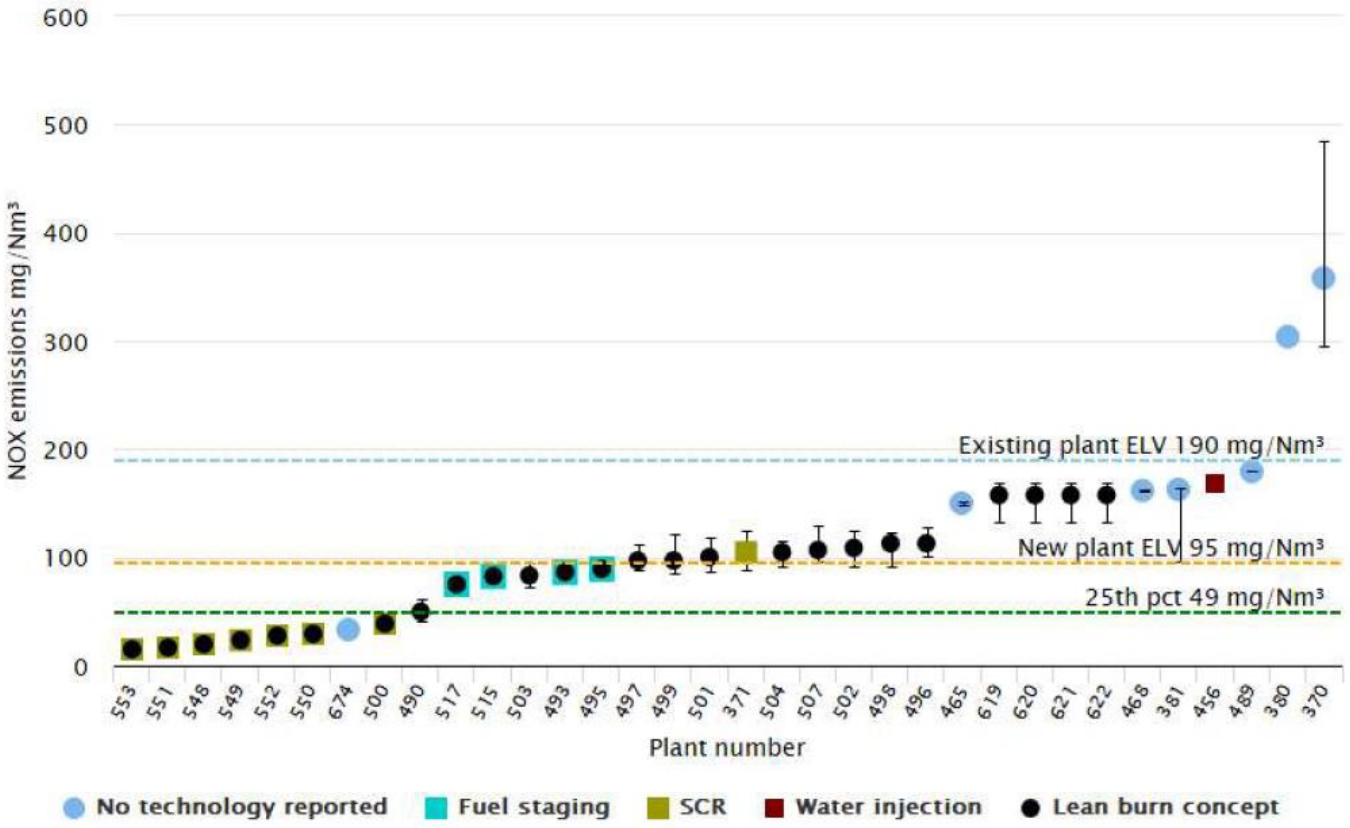
- Primary and secondary emission abatement technique ***very general cost*** data included in document. Many times without distinction for which prime mover technology and design emission limits.

- In Annex 5 different engine types are described:
  - Stationary engines can be divided **according to fuel used** into:
    (a) Diesel engines (inclusive dual fuel high pressure gas diesel (GD));
    (b) Spark plug or by other device ignited gas engines (SG); and
    (c) Dual fuel engines (low pressure gas DF). …
  - … stationary engines can be divided **into 2- and 4-stroke** engines. …
  - … stationary engines can also be divided **according to their speed**:

ANNEX 1

Figure 4-27 NO_x emissions from natural gas engines

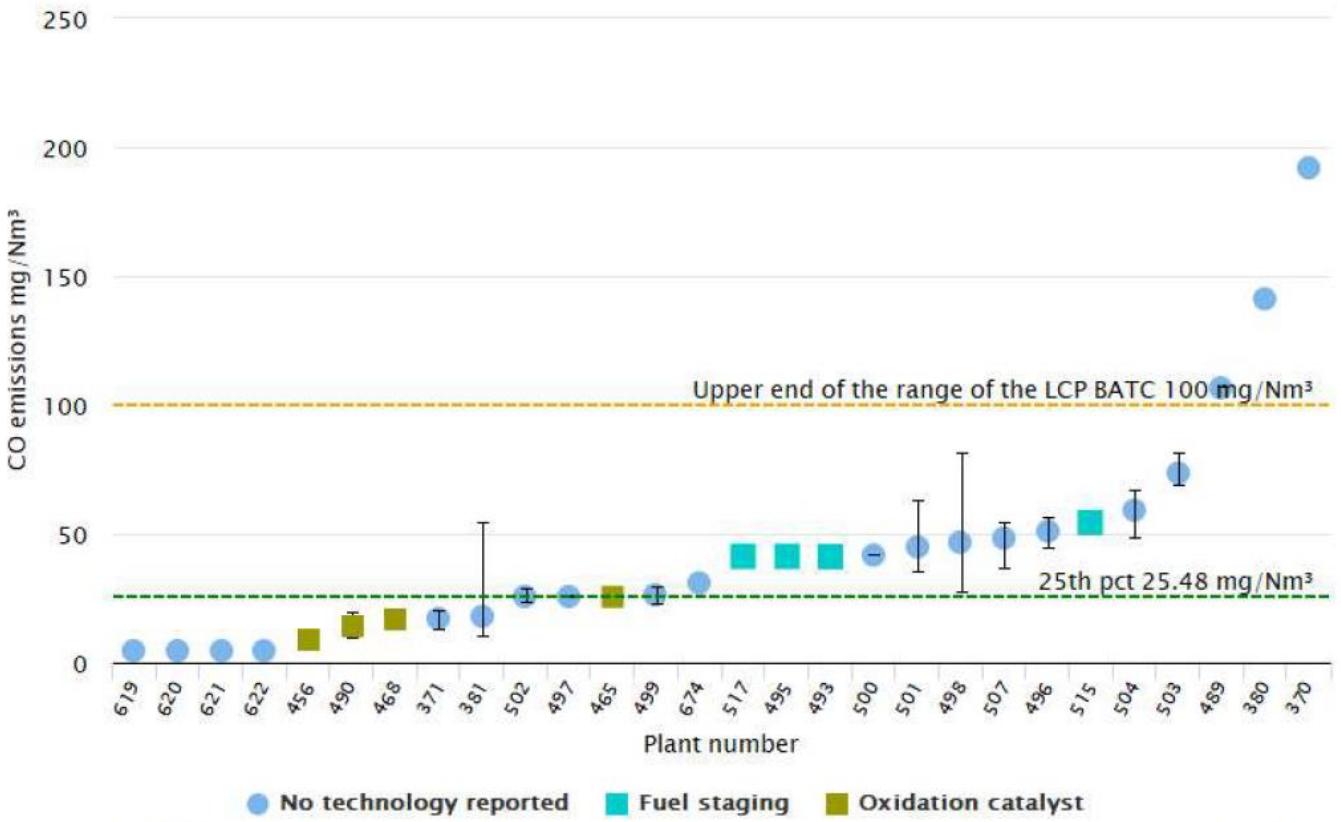
15 % O_2



ANNEX 2:

Figure 4-29 CO emissions from natural gas engines

15 % O_2



Note: plants #619-622 may have achieved these low CO values with oxidation catalyst but this was not validated.

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