

Combustion Engineering Association

# MEDIUM COMBUSTION PLANT DIRECTIVE

## EA GUIDANCE EXPLAINED

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A quick re-cap .....

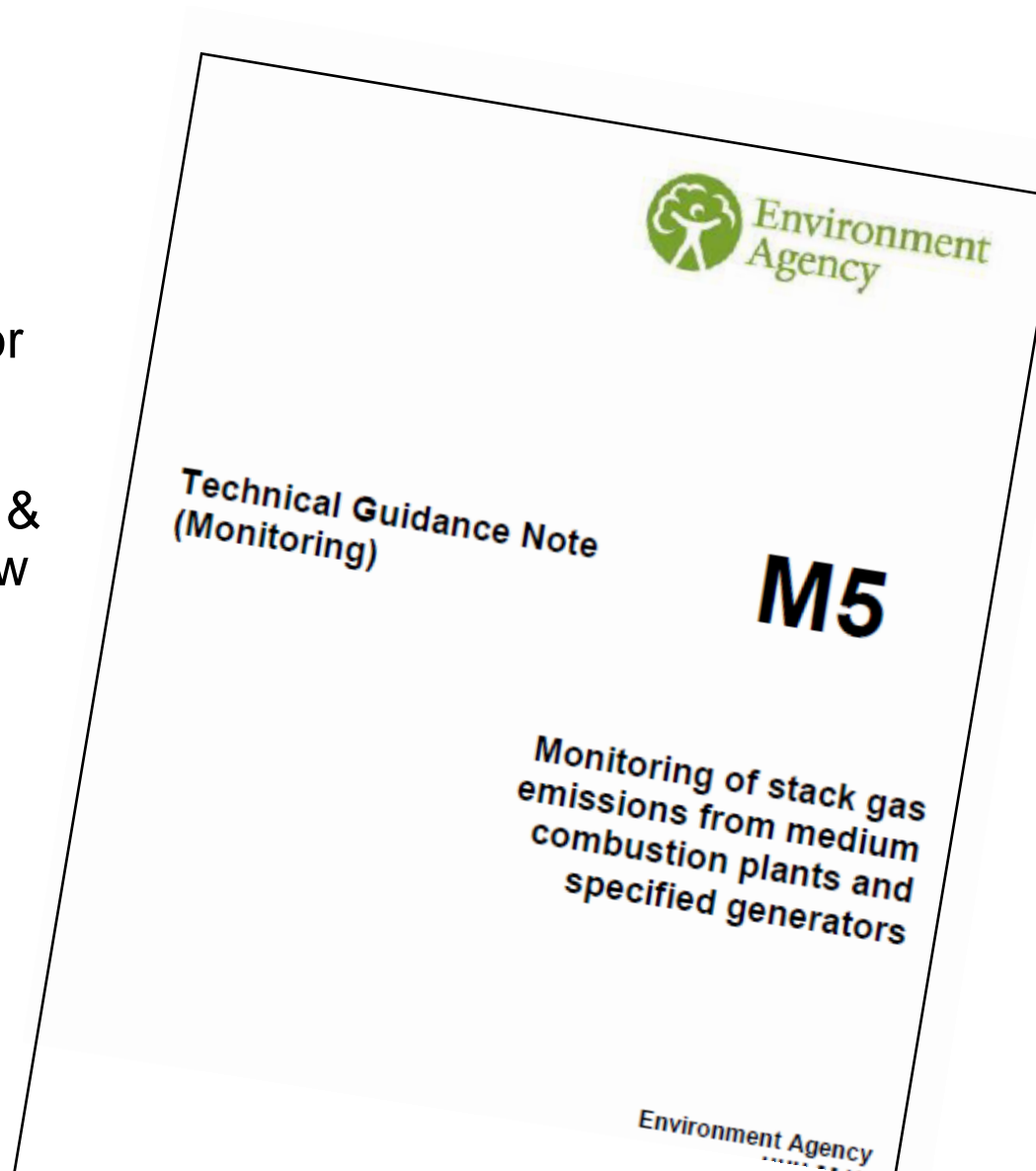
- DIRECTIVE (EU) 2015/2193 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 November 2015
- Boilers, engines and turbines 1-50 MW net rated thermal input
- SI 2018 No. 110 The Environmental Permitting (England and Wales)(Amendment) Regulations 2018 - Made 29th January 2018
- existing medium combustion plant means a plant put into operation before 20th December 2018
- Relates to emissions to air of NO<sub>x</sub>, SO<sub>x</sub> and dust, with CO measured but not limited
- All fuels and all combustion plants in the range with a very few exceptions
- Scope expanded by Defra to include smaller diesel generators with enhanced requirements

# EA Guidance

MCPD Guidance notes and  
TGN M5 for monitoring

Guidance and application forms for  
**Bespoke Permits** and **Standard  
Rules Permits** for Low Risk New  
Medium Combustion Plant (MCP) &  
Specified Generators (SG) are now  
available on

[https://consult.environment-  
agency.gov.uk/psc/mcp-and-sg-  
regulations](https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations).



## Time is of the essence

The date for implementation was 20th December 2018. All plant being installed now is 'new' plant.

EA require 12 weeks' notice of your application for a permit.

If your boiler/engine/turbine installation was completed last year you need to ensure that you have documented proof of the plant being put into operation before 20th December 2018.



# Existing or new

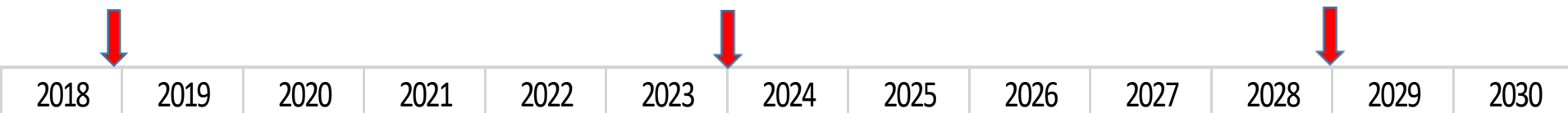
All existing MCPs have until 1/1/24 (for 5 MW and above) or 1/1/29 (for 1 to 5 MW) to apply for a permit. (6 months earlier in Scotland)

If you make significant changes to an existing combustion unit before these dates your plant may be classed as new and will need a permit before the changes are implemented.

Any existing MCP that is altered or repaired such that the ELVs for that MCP will change shall be considered new.

If an existing boiler is running on heavy oil (for example) and it is converted to run on natural gas, this will immediately be a new MCP.

An existing MCP can also become a new MCP if it is Substantially Refurbished, which means where the cost of the refurbishment work exceeds 50% of the investment cost for a new comparable MCP unit.



# Applications for permits

There are two types of permits available for stand-alone MCPs:

- Standard Rules Permits (SRP) for stationary and mobile plant;
- Bespoke permits for stationary and mobile plant.



## Standard rules SR2018 No 7

The Environmental Permitting (England & Wales) Regulations 2016

**SR2018 No 7 standard rules for new, low risk, stationary Medium Combustion Plant 1 < 20MWth (in operation after 20/12/2018)**

When referred to in an environmental permit these rules will allow the operator to operate one or more new medium combustion plant (MCP) between 1 and < 20MWth which were put in operation on or after 20/12/2018 at a specified location.

These standard rules only cover the following activities;

**Activities**

Standard Rules Permits are based on:

SR2018 No 7 standard rules for new, low risk, stationary Medium Combustion Plant 1 < 20MWth (in operation after 20/12/2018) from gov.uk, currently under consultation for rev 2.

# Standard Rules Permits (SRP)

Only applicable at present to boilers that are New Medium Combustion Plants in first operation from 20/12/2018, low risk, stationary 1 to < 20MW, and certain Tranche 'B' low risk generators, in accordance with SR2018 No 7.

Applies to combustion plant burning the following fuels:

- gas oil (including as a back up from July 2019)
- natural gas
- biogas
- gaseous fuels other than natural gas

You must include in your permit application any plant that is used on site even if it is used for less than 500 hours p.a. and therefore does not need to meet ELVs.



SRP charges as follows:

*£££ .....*

<i>No of MCPs on site</i>	<i>Application charge</i>	<i>Annual charge</i>	<i>Surrender fee</i>	<i>Transfer fee</i>
1	£446	£194	£125	£169
2-3	£520	£256	£125	£169
4-5	£620	£342	£125	£169
6-8	£720	£394	£125	£169
9-10	£779	£520	£125	£169
11-15	£813	£620	£125	£169
Tranche B generator (each)	£221	£246	£125	£169

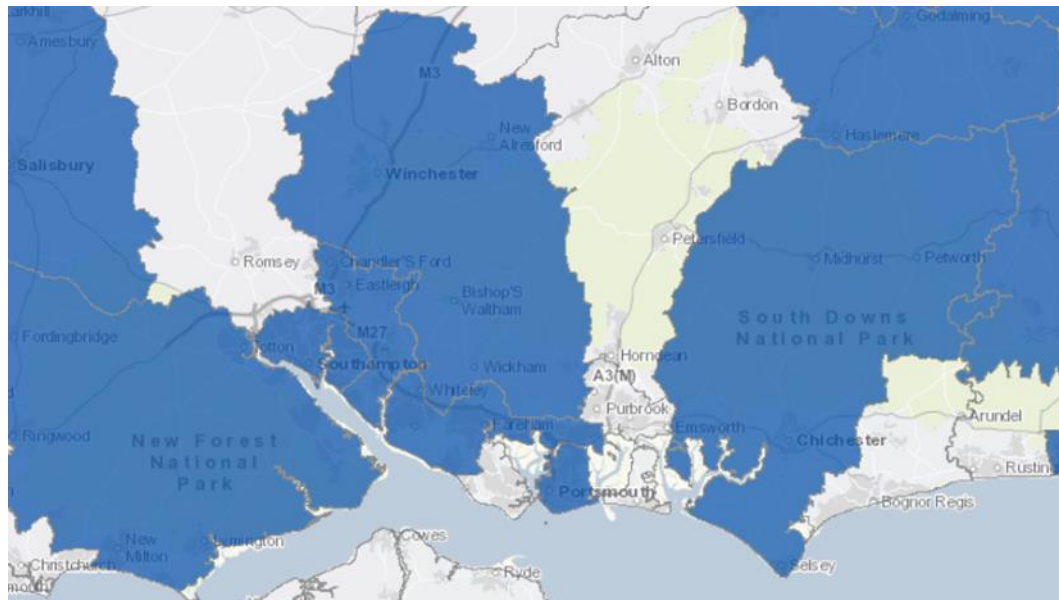
# SRP Applications

Require some fairly obvious details such as site owner and address, and plant details for the MCPs on site. Plus:

- a) any Relevant Convictions
- b) bankruptcy or insolvency proceedings
- c) management system you operate meets the EA guidance
- d) are you in a Local Authority AQMA  
(use <https://uk-air.defra.gov.uk/aqma/maps>)
- a) are your chimneys at least 15 m high and at least 2 m above nearest building?
- b) are your MCPs at least 900m from a Natura 2000 site (SAC or SPA) if burning natural gas or 2000m if burning gaseous fuels other than natural gas?
- c) background NO<sub>x</sub> level (ug/m<sup>3</sup>) at your site (data from <https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2015>)

# SRP Applications

<https://uk-air.defra.gov.uk/aqma/maps>



<https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2015>

	A	B	C	D	E	F
1	Bolton Metropolitan Borough Council					
3	Estimated Background Air Pollution Maps (base year 2015), download					
4						
5	Concentrations are as ug.m-3 NO2					
6	Local_Aut	x	y	geo_area	EU_zone	Total_NO2_15
7	24	370500	415500	6	33	10.34786
8	24	371500	415500	6	33	10.05544
9	24	370500	414500	6	33	11.06573
10	24	371500	414500	6	33	12.39934
11	24	373500	414500	6	33	12.72195

# Bespoke Permits

More complex installations requiring further information.

Typically this includes:

- a) MCPs >20MW;
- b) Where a mobile MCP is to operate in an Air Quality Management Area (AQMA);
- c) Where a stationary MCP has been identified in a LA Air Quality Management Plan;
- d) MCPs using secondary abatement to meet ELVs;
- e) Where continuous emissions monitors (CEMs) are used;
- f) Co fired plants and supplementary fired GTs;
- g) Aggregated stacks, new or existing MCPs;
- h) Fuels other than natural gas, biogas and gas oil.



## Bespoke Permit Applications

In addition to information needed for an SRP, you may need to provide

1. a non-technical summary of your application,
2. a Best Available Techniques assessment and dispersion modelling reports for an individual unit greater than or equal to 20MWth and certain Specified Generators
3. a report which shows how your MCP also meets the requirements of Schedule 24 of the Environmental Permitting Regulations which implement the relevant requirements of the Energy Efficiency Directive (2012/27/EU) or an explanation of why Schedule 24 does not apply in your case if you are applying for an installation with a total aggregated thermal input of 20 MW or more.

## Bespoke permit charges

£££ .....

<i>ref</i>	<i>Activity</i>	<i>application</i>	<i>Minor variation</i>	<i>Normal variation</i>	<i>Substantial variation</i>	<i>Transfer</i>	<i>surrender</i>
1.10.2	MCP that requires dispersion modelling	£6550	£1965	£3275	£5895	£2459	£3930
1.10.3	MCP does not require dispersion modelling	£2028	£608	£1014	£1825	£2459	£1217

Charges are for the installation, regardless of the number of MCPs  
 Annual subsistence charges will be on a time and materials basis.

# Hire boilers

EA are consulting on their approach to hire boilers under MCPD.

Estimate over 500 units available for hire in UK, 85% on site at any one time.

New hire boilers coming to market every month.

A new hired boiler may well be going to a site to replace a boiler that does not yet need a permit.

Proposal to EA is that hire company registers the unit and informs EA of deployment and site owner arranges for the permit.

## Temporary Steam and Hot Water Boiler Plant GUIDANCE FOR SAFE INSTALLATION AND USE

REF: BG08



# Monitoring

Technical Guidance Note (Monitoring) M5  
Monitoring of stack gas emissions from medium combustion plants and specified generators.

Results are standardised to a dry gas, at standard temperature and pressure (273.15K and 101.3kPa).

They are also reported to a reference O<sub>2</sub> concentration of 3% for liquid or gaseous fuels, 6% for solid fuels and 15% for engines and gas turbines.

Where gas sampling only is required, it is acceptable to sample from a location close to the MCP where the gases are well mixed (for example a downstream location that is close to the combustion zone).



Technical Guidance Note  
(Monitoring)

**M5**

Monitoring of stack gas  
emissions from medium  
combustion plants and  
specified generators

Environment Agency  
XXX 2018  
**DRAFT** Version X

# Who measures?

Organisations that service and maintain MCPs may carry out compliance monitoring of emissions for the MCPD provided

- the MCPs are individually <20MW;
- they use natural gas, gas oil or other gaseous fuels.

May use the monitoring results from a routine service visit.

If more than one measurement is made over the reporting period, the maximum emission for each reportable determinand shall be reported for this reporting period.

Service organisations shall have monitoring procedures that meet the requirements of the TGN and a management system, such as ISO 9001, which has been UKAS third party certified.

An annual service report shall be produced for each analyser.

All other installations are monitored by MCERTS organisations.

# Which instruments?

Portable monitoring systems must meet the requirements of MCERTS certification for emissions monitoring systems (this includes the MCERTS scheme for handheld emissions monitoring systems and the MCERTS scheme for transportable emissions monitoring systems).

As an interim, measurement systems that have been assessed against the requirements of EN 50379-210 may be used, provided the assessment has been made by an organisation with accreditation for these performance requirements (e.g. TUV). However, when analysers are replaced, they shall be replaced by analysers that have MCERTS certification. From 1 January 2025, all analysers shall be MCERTS certified.



# Monitoring frequency and reporting

MCPs <20 MW – every 3 years

MCPs 20-50 MW – annually

unless the permit says otherwise.

Monitoring results shall be corrected to the required reference conditions and reported to the competent authority, without subtraction of the measurement uncertainty.

A fixed expanded measurement uncertainty of  $\pm 20\%$  is specified for nitrogen oxides (NO<sub>x</sub>) when measured by service organisations.



# Monitoring strategy

A linearity, zero and span check shall be carried out annually or after a major repair to the analyser.

An annual service report shall be produced for each analyser

A burner with 5:1 turndown can be measured at 20% and 100% output, along with a number of intermediate steps.

A simpler burner can be measured at low, medium and high fire.

The result of each single measurement should be made at half hour intervals, where possible, with the maximum value being reported.

Periods of start-up and shutdown shall not be included.

Sulphur in fuel analysis may be used as an alternative to periodic stack gas measurements.

# Questions?

I

(Legislative acts)

## DIRECTIVES

**DIRECTIVE (EU) 2015/2193 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**of 25 November 2015**

**on the limitation of emissions of certain pollutants into the air from medium combustion plants**

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments

Having regard to the opinion of the European Economic and Social Committee

Having regard to the opinion of the Committee of the Regions (\*),

Acting in accordance with the ordinary legislative procedure (\*),

Whereas:

- (1) Decision No 1386/2013/EU of the European Parliament recognizes that emissions of pollutants to air have been reduced, but that air pollution levels are still problematic in many areas. According to the Action Programme, ecosystems continue to be exposed to air-polluting substances, particularly in areas of the Union, air pollution levels are still above the standards set by the World Health Organization (WHO) and the standards set by the World Bank.
- (2) In order to ensure a healthy environment for all, the Commission should complemented with adequate policy at both national and EU level to reach full compliance with air quality legislation beyond 2020.



Technical Guidance Note  
(Monitoring)

# M5

Monitoring of stack gas  
emissions from medium  
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Environment Agency  
XXX 2018  
DRAFT Version X

STATUTORY INSTRUMENTS

2018 No. 110

ENVIRONMENTAL PROTECTION, ENGLAND AND WALES

The Environmental Permitting (England and Wales)  
(Amendment) Regulations 2018

Made

29th January 2018

Coming into force in accordance with regulation 1

The Secretary of State and the Welsh Ministers make these Regulations in exercise of the powers conferred by sections 2 and 7(9) of, and Schedule 1 to, the Pollution Prevention and Control Act 1999 ("the 1999 Act")(a).

In accordance with section 2(4) of the 1999 Act, the Secretary of State and the Welsh Ministers have consulted—

- (a) the Environment Agency,
- (b) the Natural Resources Body for Wales,
- (c) such bodies or persons appearing to them to be representative of the interests of local government, industry, agriculture and small businesses as they consider appropriate, and
- (d) such other bodies or persons as they consider appropriate.

A draft of the