

Mobile and temporary boiler plant and the MCPD

There have been some useful discussions at recent MCPD workshops regarding treatment of mobile boilers under MCPD; here we are referring to steam and hot water boilers that are in containers on the back of lorries that can be transported from site to site very easily. Some of the comments we make here for boilers will be useful for diesel generators as well – the market for standby gensets is even larger than for boilers, and the timescales are often much reduced, the gensets just being installed to support an event or supply a village whilst a cable fault is repaired.

One of the larger boiler hire companies in the UK has 120 hire boilers available, 85% of which are on sites now, almost all steam boilers. They estimate they have 25% of the market in the UK. There will be boilers of all types and sizes available for hire, including biomass, heavy oil, light oil and gas fired units. Most of the steam boilers will be around 5MW, some above and many below. Most of the hot water boilers will be 1-5MW rating. Larger boilers that are to be replaced may well have multiple hired boilers to meet the demand.

The market is not huge, but probably covers some 500 individual combustion units and requires a practical and proportionate response for a specific case that the directive fails to recognise.

Mobile boiler plants are used for a number of reasons, the most common being:

- Additional heating capacity when existing plant breaks down;
- Spare capacity during plant shutdowns or routine maintenance activities;
- Replacement plant for failed boilers that need to be repaired, or scrapped and replaced.

Mobile boiler installations can therefore be operational for any time from a couple of weeks up to a period of several years; operators who have to scrap failed boilers may well have the revenue funds to pay for fuel and boiler hire/maintenance charges but not sufficient capital funds to pay for replacement plant, so a lengthy hire period is not unusual, maybe years in some cases. We recognise that there is a need to ensure that MCPD rules are not circumvented by calling a permanent installation a temporary one, but site inspections will quickly prove what is hired in on a temporary basis and what is permanently sited and connected.

Mobile boilers are by their nature flexible combustion plants, but they are all temporary. A typical installation will require a boiler, a burner for the specific fuel and output, a fuel tank if gas oil fired, a chimney, a water treatment plant (softener as a minimum and a hotwell for steam), and a set of connecting pipes and wires. All of this equipment is potentially interchangeable from one hire to the next.

Temporary MCPs may be a substitute for gas fired plant but the gas supply may not be easily accessible at the mobile location, so a gas oil fired unit would be used instead; 200 mg NO_x without abatement is achievable (albeit top-end) on gas oil, and this covers 1-50MW and new + existing gas oil fired units. Tighter limits in AQMA may be harder to achieve.

Deciding on whether a **mobile boiler is existing or new** (in MCPD terms) is a significant issue, since many steam boilers have a life of at least 20-30 years if well cared for, and will be used on many different sites and under many different combinations over their life. Operators will specify the required output and the available fuel for each hire, so mobile plant owners will be constantly creating different plant combinations to suit different local needs.

It would be unrealistic to say that a mobile boiler that was built 10 years ago and paired with a 5 year old burner for a specific installation in 2019 was a new combustion plant. Some means of determining when the older units are finally determined as new units for emissions and monitoring purposes must be agreed. Similarly, if a mobile plant is brought to a site in 2019 and is 'new' for the purposes of plant capacity on that site, it should not trigger an aggregation issue since the temporary unit will be removed again a few weeks later.

We believe that the owner of the site who has the requirement for the mobile plant should be responsible for the **registration of the mobile unit** whilst on his site and therefore the ongoing requirements of the MCPD, and that they should put that requirement in their contract or purchase order when arranging the hire. MCPD application requirements should be flexible enough for urgent hire requests which can be met literally overnight.

A temporary boiler is almost always going to be a replacement for (or an addition to) combustion plant that is already registered. There will therefore be an existing permit or MCP registration allocated to that site. The plant that has failed or been decommissioned will be advised to the regulator as (temporarily) out of service, and the mobile unit can be registered in its place. What must be avoided is the contractual complication of an operator hiring-in a 'non-compliant' MCP – responsibilities must be clearly defined. A possible solution would be to create a two permit system with the boiler Owner responsible for registration and testing etc. but the User needing a "temporary permit" to have one at his site? This may however mean that the site's total emissions are not properly tracked if the database cannot connect the hire unit and the site units together, or different hired plant is on the same site from different suppliers.

It is more sensible for the Operator to be responsible for this activity since he knows the terms and conditions under which his current plant operates and can specify the correct equipment for the mobile plant and the area in which it is to operate (which might be an AQMA). In cases where an existing gas fired boiler has to be temporarily replaced with a hired in oil fired boiler (because a gas connection is not feasible for the temporary plant), the hired in boiler should not be subjected to unrealistic emissions control requirements due to the change of fuel for the period of the hire.

Current EA thinking is "**No deployment may last more than 1 year** – repeat deployments to the same location are not permitted." There is a possibility with repeat deployment to have a "temporary" boiler running permanently on oil at 200 mg NO_x for example when perhaps the rules would not ordinarily have allowed that for a permanent installation. Is there scope to create a new hire market for dirtier fuels as a means of avoiding the most stringent ELV's? We hope this will not be the case.

Two options to consider regarding long term hire;

1. Transfer to a "full" permit after 12 months (possibly User registration rather than Owner at this point?) to give the EA/LA opportunity to insist the plant move over to gas for example or insist upon more stringent ELV's.

2. “long term hire” should have the right ELV’s for the installation designed in at the start: one supplier has approximately 40% of their fleet (call it 50 boilers, typically around 4.2 MW) on hire for over 12 months at a time (a figure assumed typical for the industry). These deployments are agreed well in advance, are generally for 3, 5, or 7 years, and the equipment is usually built specifically for the job, so there is scope to design-in better ELV’s from the outset. Long term hire boilers are predominantly gas fired.

Is the **500 hour exemption** likely to apply? Mobile boiler owners may occasionally have boilers that are available for hire and do not run for more than 500 hours in a year, but this is probably unusual. The boiler will often be hired to replace or supplement an existing unit, so the 500 hour exemption is very unlikely to apply unless the Operator has a very clear operating strategy that proves the mobile unit is simply to replace a 500 hour unit. In the heating and steam industry this is very unlikely; in the standby diesel market this scenario is much more likely since you rent standby diesel as an insurance for grid outage, not normally as a replacement for continuously running plant.

Will **monitoring** be carried out properly? Because the boilers are owned by the hire company, they usually take a great interest in the condition of their asset and ensure its well-being. Routine maintenance including efficiency and emissions tests will be part of the maintenance provided by the owner of the asset. All hired boilers will be commissioned on installation to ensure they have travelled well and have been properly connected, so emissions measurements can be taken at that time. It will be unusual for hire plant to be >20MW, so emissions tests will be every three years in the worst case.

Although some boilers are hired for longer periods, most will be returned to the hire company in less than 3 years, and have their emissions measured at the start of every hire period. There is no reason to presume that the records for mobile plant of plant operation, maintenance and emissions will be any less robust than a permanent installation, probably better.

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On behalf of CEA
revised 24 July 2017