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SCAQMD Rule 1147 and the Effect on Autoclaves and Ovens

What is rule 1147 and what changed?

South Coast Air Quality Management District (SCAQMD) published and amended rule 1147 in May 2022 that includes changes that will affect thousands of equipment operators in the district. In particular, operators of autoclaves and ovens will be affected by the changes.

In the new rule, autoclaves are defined as a specific type of equipment, whereas prior to this amendment, autoclaves were essentially governed by the oven emissions requirements. Autoclaves are now required to meet an emissions level of 30 PPMV NOx.

Ovens were previously required to meet 30 PPMV NOx are now required to meet a more stringent requirement of 20 PPMV NOx.

How does this change affect organizations in the district? (What's the problem?)

Many organizations have old equipment that was never designed to meet any emission requirement at all. Much of the old equipment installed and operating is still used heavily and relied on for production. If this equipment cannot meet the new requirements, it will not be permitted to operate, so organizations' production capacity will be affected and for some small businesses, affected to a severe degree.

How can I find out if my equipment is affected or needs to be tested?

If you have an autoclave or an oven that is operated within the boundaries of the SCAQMD and it is heated with a gas burner that is more than 12 years old as of January 1, 2023, you most likely are required to submit a permit application to show how you will comply. Once you have the permit, you are allowed up to 12 months to comply.

If you already have an emissions permit that met the previous 1147 oven emissions requirement of 30 PPM and your burner is 32 years old, you will need to submit a new permit application to show compliance to the new rule.

If you have multiple gas fired units, there are allowed compliance schedule for bringing your equipment into compliance.

You may already reside in a local area that requires regular emissions testing, so you may already know the emissions of your equipment. If you don't, you will need to have the emissions source tested.

The particulars of the new rule can be confusing, so if you need assistance in determining where your equipment falls in, contact ASC for assistance.

What are some of the likely outcomes of testing my emissions?

If your equipment is significantly old, the burner is unlikely to be a low-NOx burner, so initial emissions testing may show emissions that exceed the requirements. In other cases, you may already have a low-NOx burner that also fails to meet the requirements, but simply requires some tuning and resampling to meet the requirements.

The tuning required can be iterative in nature and requires a service technician with knowledge and experience to know what adjustments are needed to quickly get the equipment optimally tuned and tested.

What are your options for dealing with the issue if your equipment does not meet the requirements?

There are varying levels of steps you can take to upgrade your oven or autoclave performance to meet the new requirements. They range from tuning the existing units, to decommissioning the equipment, to upgrading portions or all of the combustion equipment.

ASC Process Systems has full service and engineering departments with the expertise and decades of experience needed to help operators consider their options, test their equipment, and bring their equipment into compliance to the new rule.