

Air Quality Update

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EPA'S TAILORING RULE FOR GHG PERMITTING

Beginning January 2, 2011, the US EPA will begin implementation of permitting for Greenhouse Gas (GHG) emissions from Major Sources. Specifically, new or modified major stationary sources that meet emissions applicability thresholds will be required to obtain a PSD permit outlining how they will control GHG emissions. PSD requires facilities to apply Best Available Control Technology (BACT), which is determined on a case-by-case basis taking into account, among other factors, the cost and effectiveness of the control.

From January 2 – June 30, 2011, sources that are subject to Prevention of Significant Deterioration (PSD) or Title V for other pollutants (e.g., NO_x, VOCs, PM₁₀, etc.) will trigger GHG BACT requirements if the new or modified source exceeds CO₂ equivalent (CO₂e) increases of 75,000 tons per year.

Starting July 1, 2011, PSD permitting will be required, regardless of other pollutant emissions, for all:

- New projects with emissions $\geq 100,000$ tpy of CO₂e and > 100 tpy or 250 tpy (depending on source category) of GHGs (without the equivalent multipliers); or
- Modifications at an existing Major Source with an increase $\geq 75,000$ tpy of CO₂e and $> 100/250$ tpy of GHGs.

Title V permitting will be required for new and existing facilities with a potential to emit $\geq 100,000$ tpy of

CO₂e and 100 tpy of GHGs without the equivalent multiplier. For facilities that are not now in Title V, either because they are Minor Sources or because they have taken emission limits to stay out of Title V, they may have to apply for and obtain a Title V permit solely due to CO₂e emissions. These applications will be due after July 1, 2011 but before July 1, 2012, depending upon when the local district sets its deadlines.

To accommodate this new permitting requirement, there may be a number of additional changes made:

- The local districts will likely have to modify their permitting rules and regulations to incorporate the GHGs;
- Annual reporting may require GHG reporting to quantify GHG emissions and Title V applicability for all sources; and
- CA AB32 requirements may be incorporated into Title V permits.

Figure 1. Tailoring Rule GHGs

Final Rule Group of Six GHGs	CO ₂ Equivalents*
Carbon dioxide (CO ₂)	1
Methane (CH ₄)	21
Nitrous oxide (N ₂ O)	310
Hydrofluorocarbons (HFCs)	12-11,700**
Perfluorocarbons (PFCs)	6,500-17,340**
Sulfur hexafluoride (SF ₆)	23,900

* Values per Table A-1 to Subpart A of Part 98
** Depending upon the exact compound

The EPA will also be developing GHG BACT guidelines and may undertake additional rulemaking for smaller facilities. Below is a link to the EPA fact sheet, related information, and the rule language:

<http://www.epa.gov/nsr/actions.html#may10>

Air Quality Tip

Air District Inspectors are sent out to ensure compliance and one of the first things they often look for are records required by the air permit or source specific rules. Since missing records or records that show noncompliance are proof that there is a violation, inspectors tend to focus on the records, such as material throughputs, source tests, periodic analyzer tests, VOC records, etc. Facilities that make a complete list of all the records required and review their records internally on a quarterly basis will do much better when the air district comes to inspect.

Upcoming Training Offered by UCI or Yorke Engineering:

- Bay Area Air Quality Permitting and Compliance Class: March 15th, 2011
<http://www.yorkeengr.com/classes.htm>

Upcoming Due Dates:

- CARB LSI Fleet Ave. Emission Reduction; 1/1/2011
- CARB GHG Reporting; 4/1/2011 (or 6/1/2011 for certain sources)
- USEPA GHG Report; 3/31/2011
- USEPA GHG Electronic Reporting Tool Reg.; 1/30/2011
- Title V – Report of Required Monitoring semi-annually*
- Title V – Compliance Certification annually*
- Title V – Application for Permit Renewal due 180 days prior to permit expiration.

*For all Title V facilities, your due date is listed in your Title V permit under Section F and G.

NEW EMISSION STANDARD FOR SMALL BOILERS, STEAM GENERATORS, & PROCESS HEATERS

Regulation 9, Rule 7 - *Nitrogen Oxides (NO_x) and Carbon Monoxide (CO) from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters* was amended on July 30, 2008 to establish new NO_x and CO emission standards that begin to take effect January 1st, 2011 for small older units (see table below) and expand from there.

The rule requires existing facilities with the above-mentioned devices to have at least one-third of those devices in compliance with the NO_x standard by 1/1/2011 or 10 years after the original manufacturer date if it was manufactured prior to 1/1/2011. Compliance with the requirement can be verified using a portable analyzer test as approved by the District's protocol. Registration is also required for new boilers, steam generators, and process heaters rated between 2 and 10 MMBtu/hr, unless the unit has a permit to operate.

STACK TEMPERATURE LIMITS FOR SMALL BOILERS, STEAM GENERATORS, & PROCESS HEATERS

Starting January 1st, 2011, these are the limits of the exhaust temperature at the stack for devices also subject to Regulation 9, Rule 7.

Heater Type	Gaseous Fuel
Firetube	100°F over saturated steam temperature for steam boiler, 100°F over hot water temperature for hot water boiler OR 250°F greater than ambient temperature, whichever is higher
Watertube	150°F over saturated steam temperature for steam boiler, 150°F over hot water temperature for hot water boiler OR 250°F greater than ambient temperature, whichever is higher

NEW ARCHITECTURAL COATING VOC LIMITS

Regulation 8, Rule 3 was amended on July 1, 2009 to include new VOC limits for architectural coatings. Architectural coatings are defined as a coating to be applied to stationary structures and their appurtenances at

pavement, or to curbs. The new VOC content limits are listed in Table 2 of the rule with an effective date of January 1, 2011. A sample of the new limits compared to the old limits is shown below:

Coating Type	Old VOC Limit (g/l)	New VOC Limit (g/l)
Flat	100	50
Non-Flat	150	100
High-Gloss	250	150
Floor	250	100
Graphics Arts	500	500
High Temperature	420	420
Industrial Maintenance	250	250
Primers, Sealers	200	100
Roof	250	50

Any coatings listed in Table 2 that are manufactured prior to the January 1st, 2011 may be supplied, offered for sale, or sold for up to three years after the effective dates provided that the coating was in compliance with the VOC limits in effect at the time of manufacture, and the date or date-code is displayed on the coating container in accordance with the container labeling requirements.

BAAQMD Single Facility Compliance Dates*

Rated Heat Input (million BTU/hr)	NO _x Limit (ppmv)	33% of Devices	66% of Devices	100% of Devices
>2 to 5	30	Effective Date: Later of Jan. 1, 2011; <u>or</u> 10 years after the manufacture date if manufactured prior to 1/1/2011	1/1/2012; or one year after Effective Date	1/1/2013; or two years after Effective Date
>5 to <10	15	Effective Date: Later of Jan. 1, 2012; <u>or</u> 10 years after the manufacture date if manufactured prior to 1/1/2012	1/1/2013; or one year after Effective Date	1/1/2014; or two years after Effective Date
10 to <20	15			
20 or more load following unit	15	Effective Date: Later of Jan. 1, 2012; <u>or</u> 5 years after the manufacture date if manufactured prior to 1/1/2012	1/1/2013; or one year after Effective Date	1/1/2014; or two years after Effective Date
20 to <75	9			
75 or More	5			

*CO limit for all of the above is 400 ppmv, same dates; See Rule for Low Use, Exemptions, and off or non-gaseous fuels (landfill gas, digester gas)

Yorke Engineering, LLC specializes in environmental and air quality consulting for stationary and mobile sources including dispersion modeling, health risk assessments, permitting, emission inventories, air quality compliance systems, etc. Yorke Engineering has over 200 customers including a wide variety of industrial facilities and government organizations throughout California.

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