



Proposed Amended Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters

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PUBLIC WORKSHOP

OCTOBER 8, 2020

Background

- Rule 1146 was adopted on September 9, 1988
 - Reduces NOx emissions from industrial, institutional and commercial operations boilers, steam generators, and process heaters ≥ 5 million BTU per hour
- Rule 1146 was last amended on December 7, 2018
 - Expanded applicability units at facilities in Regional Clean Air Incentives Market (RECLAIM)
 - NOx emission limits updated to reflect Best Available Control Retrofit Technology (BARCT) levels
 - Amendments included an ammonia limit for new and modified air pollution control equipment, such as Selective Catalytic Reduction (SCR) that operates with ammonia injection



Regulation XIII - New Source Review

Requirements for Ammonia Emissions

- Ammonia emissions from new installations of SCR will trigger Regulation XIII – New Source Review
- Under Regulation XIII the increased ammonia emissions must meet a Best Available Control Technology (BACT) limit of 5 ppm
- Based on evaluation of Regulation XIII and Rule 1146, staff concluded that the ammonia emission limit is a Regulation XIII issue and should be evaluated in the permitting process rather than Rule 1146
 - Allows permit engineers to evaluate the ammonia limit for new and modified SCRs on a case-by-case basis to ensure the Rule 1146 NOx limit can be achieved

Proposed Amendments

<small>September 2020</small>	
<small>(Adopted September 9, 1988)(Amended January 6, 1989)(Amended May 13, 1994) (Amended June 16, 2000)(Amended November 17, 2000)(Amended September 5, 2008) (Amended November 1, 2013)(Amended December 7, 2018) <u>Proposed Amended Rule 1146 December 2020</u></small>	
PROPOSED AMENDED RULE 1146.	EMISSIONS OF OXIDES OF NITROGEN FROM INDUSTRIAL, INSTITUTIONAL, AND COMMERCIAL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS
(a) Applicability	This rule applies to boilers, steam generators, and process heaters of equal to or greater than 5 million Btu per hour rated heat input capacity used in all industrial, institutional, and commercial operations.
(b) Definitions	
(1)	ADSORPTION CHILLER UNIT means any natural gas fired unit that captures and uses waste heat to provide cold water for air conditioning and other process requirements.
(2)	ANNUAL HEAT INPUT means the total heat input to a unit during a calendar year.
(3)	ATMOSPHERIC UNIT means any natural gas fired unit with a heat input less than or equal to 10 million Btu per hour with a non-sealed combustion chamber in which natural draft is used to exhaust combustion gases.
(4)	BOILER or STEAM GENERATOR means any combustion equipment fired with liquid and/or gaseous (including landfill and digester gas) and/or solid fossil fuel and used to produce steam or to heat water, and that is not used exclusively to produce electricity for sale. Boiler or Steam Generator does not include any open heated tank, adsorption chiller unit, or waste heat recovery boiler that is used to recover sensible heat from the exhaust of a combustion turbine or any unfired waste heat recovery boiler that is used to recover sensible heat from the exhaust of any combustion equipment.
(5)	BTU means British thermal unit(s).
(6)	COMMERCIAL OPERATION means any office building, lodging place, or similar location designed for tenancy by one or more business entities or residential occupants.
(7)	FIRE-TUBE BOILER means any boiler that passes hot gases from a fire box through one or more tubes running through a sealed container of water. The
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- Proposed Amended Rule 1146 will remove the ammonia concentration limit of 5 ppm for new and modified pollution controls with ammonia emissions
 - Ammonia limits will be addressed under Regulation XIII
 - Prevents conflicts with implementing Regulation XIII - New Source Review

Proposed Amendments (*cont.*)

<small>September 2020</small>	
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- Proposed Amended Rule 1146 retains the compliance demonstration requirements for new, replaced and modified air pollution control equipment subject to an ammonia emission limit in the permit, including:
 - Quarterly source tests for the first year of operation and annual source tests requirements thereafter
 - Utilizing an ammonia Continuous Emissions Monitoring System certified under an approved protocol

Next Steps

- Close of comments on October 23, 2020
- Set Hearing on November 6, 2020
- Public Hearing on December 4, 2020
 - Determined to be exempt from CEQA
 - No adverse socioeconomic impacts