**PROPOSED REGULATION OF THE**

**STATE ENVIRONMENTAL COMMISSION**

**LCB File No. R027-15**

July 13, 2015

EXPLANATION – Matter in ***italics*** is new; matter in brackets **[**~~omitted material~~**]** is material to be omitted.

AUTHORITY: §§1-7, NRS 445B.210.

A REGULATION relating to air pollution; revising provisions related to standards of quality for ambient air; and providing other matters properly relating thereto.

**Legislative Counsel's Digest:**

Existing law authorizes the State Environmental Commission to establish standards for air quality. (NRS 445B.210) This regulation revises provisions prescribing the minimum state and federal standards of quality for ambient air for certain particulate matter.

**Section 1.** Chapter 445B of NAC is hereby amended by adding thereto the provisions set forth as sections 2 and 3 of this regulation.

**Sec. 2.** ***"$PM_{2.5}$ emissions" means $PM_{2.5}$ emitted directly from an air emissions source or activity. The term includes gaseous emissions emitted from a source or activity that condense to form particulate matter at ambient temperatures.***

**Sec. 3.** ***"$PM_{10}$ emissions" means $PM_{10}$ emitted directly from an air emissions source or activity. The term includes gaseous emissions emitted from a source or activity that condense to form particulate matter at ambient temperatures.***

**Sec. 4.** NAC 445B.2203 is hereby amended to read as follows:

445B.2203 1. No person may cause or permit ~~[the emission of]~~ $PM_{10}$ ***emissions*** resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:

(a) For maximum input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat.

(b) For maximum input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation:

$$Y = 1.02X^{-0.231}$$

(c) For maximum input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation:

$$Y = 17.0X^{-0.568}$$

2. For the purposes of paragraphs (b) and (c) of subsection 1:

(a) "X" means the maximum operating rate in million Btu's per hour.

(b) "Y" means the allowable rate of emission in pounds per million Btu's.

**Sec. 5.** NAC 445B.2207 is hereby amended to read as follows:

445B.2207 1. Except as otherwise provided in subsection 6:

(a) Burning in any incinerator other than the multiple-chamber type is prohibited.

(b) Incinerator burning which produces, for periods totaling 1 minute in 1 hour, a visible emission which is of an opacity equal to or greater than 20 percent is prohibited.

2. Incinerators used for the burning of pathological wastes, wet garbage or high moisture content material must be high temperature types with either grate or solid hearth construction, drying shelves for wet wastes and an auxiliary heating unit to ensure temperatures of 1400 degrees Fahrenheit (760 degrees Centigrade) for not less than 0.3 of a second. The hearth must be frequently cleaned at regular intervals to prevent buildup of residues and deposits.

3. The rated burning capacity, operating and maintenance procedures approved by the Director must be posted conspicuously at or near the incinerator.

4. Allowable $PM_{10}$ emissions from incinerators of less than 2,000 lb per hour rated burning capacity may not exceed 1.8 lb/ton of dry refuse charged.

5. Allowable $PM_{10}$ emissions from incinerators equal to or greater than 2,000 lb per hour burning capacity must be calculated using the following equation:

$$E = 0.6\ (40.7 \times 10^{-5} C)$$

For the purposes of this subsection, "E" means the maximum allowable rate of ~~[emission of]~~ $PM_{10}$ ***emissions*** in pounds per hour and "C" means the rate of charge of dry refuse in pounds per hour.

6. Single-chamber incinerators may be used at single-family residences, in all areas of the State, except in and within 1 mile of the boundaries of Babbitt, Battle Mountain, Caliente, Carlin, Douglas County, East Ely, Elko Township, Ely, Fallon, Fernley, Gabbs, Hawthorne, Lovelock, McGill, Tonopah, Virginia City, Weed Heights, Wells, Winnemucca and Yerington, and inside

the limits of Carson City and in those portions of Lyon County that are within 1 mile of the Carson City line, unless otherwise prohibited by local ordinances or regulations.

**Sec. 6.** NAC 445B.22096 is hereby amended to read as follows:

445B.22096 1. The sources listed below must install, operate and maintain the following control measures which constitute BART and must not emit or cause to be emitted $NO_x$, $SO_2$, or $PM_{10}$ in excess of the following limits:

(a) For power-generating units numbers 1 and 2 of NV Energy's Fort Churchill Generating Station, located in hydrographic area 108:

| UNIT (Boiler) | $NO_x$ | | $SO_2$ | | $PM_{10}$ | |
|---|---|---|---|---|---|---|
| | Emission Limit ($lb/10^6$ Btu, 12-month rolling average) | Control Type | Emission Limit ($lb/10^6$ Btu, 24-hr average) | Control Type | Emission Limit ($lb/10^6$ Btu, 3-hr average) | Control Type |
| 1 | 0.20 | Low $NO_x$ burners with flue gas recirculation | 0.05 | Pipeline natural gas and/or No. 2 fuel oil | 0.03 | Pipeline natural gas and/or No. 2 fuel oil |
| 2 | 0.16 | | 0.05 | | 0.03 | |

(b) For power-generating units numbers 1, 2 and 3 of NV Energy's Tracy Generating Station, located in hydrographic area 83:

| UNIT (Boiler) | $NO_x$ | | $SO_2$ | | $PM_{10}$ | |
|---|---|---|---|---|---|---|
| | Emission Limit ($lb/10^6$ Btu, 12-month rolling average) | Control Type | Emission Limit ($lb/10^6$ Btu, 24-hr average) | Control Type | Emission Limit ($lb/10^6$ Btu, 3-hr average) | Control Type |
| 1 | 0.15 | Low $NO_x$ burners with flue gas recirculation | 0.05 | Pipeline natural gas and/or No. 2 fuel oil | 0.03 | Pipeline natural gas and/or No. 2 fuel oil |
| 2 | 0.12 | | 0.05 | | 0.03 | |
| 3 | 0.19 | Low $NO_x$ burners with selective noncatalytic reduction | 0.05 | | 0.03 | |

(c) For power-generating units numbers 1, 2 and 3 of NV Energy's Reid Gardner Generating Station, located in hydrographic area 218:

| UNIT (Boiler) | $NO_x$ | | $SO_2$ | | $PM_{10}$ | |
|---|---|---|---|---|---|---|
| | Emission Limit ($lb/10^6$ Btu, 30-day rolling average) | Control Type | Emission Limit ($lb/10^6$ Btu, 24-hr average) | Control Type | Emission Limit ($lb/10^6$ Btu, 3-hr average) | Control Type |
| 1 | 0.20, averaged across all 3 units | Low $NO_x$ burners with over-fire air and selective noncatalytic reduction | 0.15 | Wet soda ash flue gas desulphurization | 0.015 | Fabric filter |
| 2 | | | 0.15 | | 0.015 | |
| 3 | | | 0.15 | | 0.015 | |

(d) For power-generating units numbers 1 and 2 of Southern California Edison's Mohave Generating Station, located in hydrographic area 213:

| UNIT (Boiler) | $NO_x$ | | | $SO_2$ | | $PM_{10}$ | |
|---|---|---|---|---|---|---|---|
| | Emission Limit ($lb/10^6$ Btu, 12-month rolling average) | Mass Emission Rate (lb/hr, 1-hr average) | Control Type | Emission Limit ($lb/10^6$ Btu, 30-day rolling average) | Control Type | Emission Limit ($lb/10^6$ Btu, 3-hr average) | Control Type |
| 1 | 0.15 | 788 | Low $NO_x$ burners with over-fire air and conversion to pipeline natural gas only | 0.0019 | Conversion to pipeline natural gas only | 0.0077 | Conversion to pipeline natural gas only |
| 2 | 0.15 | 788 | | 0.0019 | | 0.0077 | |

2. The control measures established in subsection 1 may be replaced or supplemented with alternative technologies approved in advance by the Director, provided that the emission limits in subsection 1 are met. The established or approved control measures must be installed and operating:

(a) For NV Energy's Fort Churchill, Tracy and Reid Gardner generating stations:

(1) On or before June 30, 2016; or

(2) Not later than 5 years after approval of Nevada's state implementation plan for regional haze by the United States Environmental Protection Agency Region 9, ➥ whichever occurs first.

(b) For Southern California Edison's Mohave Generating Station, at the time that each unit resumes operation.

3. If the ownership of any BART regulated emission unit changes, the new owner must comply with the requirements set forth in subsection 2.

4. For purposes of this section, ~~[emissions of]~~ $PM_{10}$ ***emissions*** include the components of $PM_{2.5}$ ***emissions*** as a subset.

**Sec. 7.** NAC 445B.22097 is hereby amended to read as follows:

445B.22097 1. The table contained in this section lists the minimum standards of quality for ambient air.

| | | NEVADA STANDARDS[A] | | NATIONAL STANDARDS[B] | | |
|---|---|---|---|---|---|---|
| POLLUTANT | AVERAGING TIME | CONCENTRATION[C] | METHOD[D] | PRIMARY[C, E] | SECONDARY[C, F] | METHOD[D] |
| Ozone | 8 hours | 0.075 ppm | Chemiluminescence | 0.075 ppm | Same as primary | Chemiluminescence |
| Ozone-Lake Tahoe Basin, #90 | 1 hour | 0.10 ppm (195 µg/m$^3$) | Ultraviolet absorption | -- | -- | -- |
| Carbon monoxide less than 5,000′ above mean sea level | 8 hours | 9 ppm (10,500 µg/m$^3$) | Nondispersive infrared photometry | 9 ppm (10 mg/m$^3$) | None | Nondispersive infrared photometry |
| At or greater than 5,000′ above mean sea level | | 6 ppm (7,000 µg/m$^3$) | | | | |
| Carbon monoxide at any elevation | 1 hour | 35 ppm (40,500 µg/m$^3$) | | 35 ppm (40 mg/m$^3$) | | |
| Nitrogen dioxide | Annual arithmetic mean | 0.053 ppm (100 µg/m$^3$) | Gas phase chemiluminescence | 53 ppb[G] | Same as primary | Gas phase chemiluminescence |
| | 1 hour | 100 ppb | -- | 100 ppb | None | |
| Sulfur dioxide | Annual arithmetic mean | 0.030 ppm (80 µg/m$^3$) | Ultraviolet fluorescence | 0.03 ppm[H] (1971 standard) | None | Spectrophotometry (Pararosaniline method) |
| | 24 hours | 0.14 ppm (365 µg/m$^3$) | | 0.14 ppm[H] (1971 standard) | | |
| | 3 hours | 0.5 ppm (1,300 µg/m$^3$) | | None | 0.5 ppm | |
| | 1 hour | 75 ppb | -- | 75 ppb | None | |
| Particulate matter as $PM_{10}$ | ~~[Annual arithmetic mean~~ | ~~50 µg/m3]~~ | High volume $PM_{10}$ sampling | ~~[None~~ | ~~None~~ | ~~-]~~ |
| | 24 hours | 150 µg/m$^3$ | | 150 µg/m$^3$ | Same as primary | High or low volume $PM_{10}$ sampling |
| Particulate matter as $PM_{2.5}$ | Annual arithmetic mean | ~~[15.0]~~ ***12.0*** µg/m3 | -- | ~~[15.0]~~ ***12.0*** µg/m3 | Same as primary | Low volume $PM_{2.5}$ sampling |
| | 24 hours | 35 µg/m$^3$ | -- | 35 µg/m$^3$ | Same as primary | |

| | | NEVADA STANDARDS[A] | | NATIONAL STANDARDS[B] | | |
|---|---|---|---|---|---|---|
| POLLUTANT | AVERAGING TIME | CONCENTRATION[C] | METHOD[D] | PRIMARY[C, E] | SECONDARY[C, F] | METHOD[D] |
| Lead (Pb) | Rolling 3 mo. average | 0.15 µg/m$^3$ | High volume sampling, acid extraction and atomic absorption spectrometry | 0.15 µg/m$^3$ | Same as primary | High volume sampling, acid extraction and atomic absorption spectrometry |
| Hydrogen sulfide | 1 hour | 0.08 ppm (112 µg/m$^3$)[I] | Ultraviolet fluorescence | -- | -- | -- |

Notes:

Note A: The Director shall use the Nevada standards in considering whether to issue a permit for a stationary source and shall ensure that the stationary source will not cause the Nevada standards to be exceeded in areas where the general public has access. For the 2006 particulate matter as $PM_{2.5}$ 24-hour and annual standards, the 2010 nitrogen dioxide 1-hour standard and the 2010 sulfur dioxide 1-hour standard, the Director shall use the form of the standards set forth in 40 C.F.R. §§ 50.11, 50.13 and 50.17, as those provisions existed on June 23, 2014, to ensure that the Nevada standard is no more stringent than the National standard in determining whether the stationary source will comply with the Nevada standards in areas where the general public has access.

Note B: The National standards are used in determinations of attainment or nonattainment. The form of a National standard is the criteria which must be satisfied for each respective concentration level of a standard for the purposes of attainment. The form for each National standard is set forth in 40 C.F.R. Part 50 and may be viewed at **http://www.epa.gov/air/criteria.html**.

Note C: Where applicable and except as otherwise described in Note G, concentration is expressed first in units in which it was adopted. Measurements of air quality that are expressed as mass per unit volume, such as micrograms per cubic meter, must be corrected to a reference temperature of 25 degrees Centigrade and a reference pressure of 760 mm of Hg (1,013.2

millibars), except measurements of particulate matter as $PM_{2.5}$ and lead (Pb), which are calculated in micrograms per cubic meter at local conditions; "ppb" in this table refers to parts per billion by volume, or nanomoles of regulated air pollutant per mole of gas; "ppm" refers to parts per million by volume, or micromoles of regulated air pollutant per mole of gas; "$\mu g/m^3$" refers to micrograms per cubic meter.

Note D: Reference method as described by the EPA. Any reference method specified in accordance with 40 C.F.R. Part 50 or any reference method or equivalent method designated in accordance with 40 C.F.R. Part 53 may be substituted.

Note E: National primary standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.

Note F: National secondary standards are the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a regulated air pollutant.

Note G: The official National annual standard for nitrogen dioxide is 0.053 ppm. The National annual standard is identified in this table in equivalent units of parts per billion for the purpose of simplifying its comparison with the National 1-hour standard which is also identified in parts per billion.

Note H: The 1971 National sulfur dioxide standards remain in effect for an area until 1 year after the area is designated for the 2010 National sulfur dioxide standard, except that in an area designated nonattainment for the 1971 National sulfur dioxide standards, the 1971 standards remain in effect until an implementation plan to attain or maintain the 2010 National sulfur dioxide standards is approved.

Note I: The ambient air quality standard for hydrogen sulfide does not include naturally occurring background concentrations.

2. These standards of quality for ambient air are minimum goals, and it is the intent of the Commission in this section to protect the existing quality of Nevada's air to the extent that it is economically and technically feasible.