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## FISCAL IMPACT REPORT

SPONSOR: Heaton DATE TYPED: 02/28/03 HB 371/aHENRC  
 SHORT TITLE: Ambient Air Quality Standards SB \_\_\_\_\_  
 ANALYST: Valenzuela

### APPROPRIATION

Appropriation Contained		Estimated Additional Impact		Recurring or Non-Rec	Fund Affected
FY03	FY04	FY03	FY04		
	NFI				

(Parenthesis ( ) Indicate Expenditure Decreases)

Relates to HB 372 that proposes that regulations applicable to air quality operating permits be consistent with, but no more stringent than, federal regulations.

### SOURCES OF INFORMATION

- *Report of the Legislative Finance Committee to the Forty-sixth Legislature, First Session, January 2003 for Fiscal Year 2003 – 2004, pp. 591 – 592.*
- *Emerging Issues in Air Quality and Regional Haze State Implementation Plans, Staff Brief for LFC Hearing, June 2002.*

Department of Environment (NMED)

### SUMMARY

#### Synopsis of HENRC amendment

The House Energy and Natural Resources Committee (HENRC) amendment to House Bill 371 deletes the provision in the original bill that automatically repeals standards if the Environmental Improvement Board or local board does not act on them within the prescribed deadline.

#### Synopsis of Original Bill

House Bill 371 adds a new section to the Air Quality Control Act giving authority to the Environmental Improvement Board (EIB or Board) or local board to set in rule state ambient air quality standards sufficient to protect public health, which are based on air quality criteria issued pursuant to the federal act and the latest scientific knowledge. The bill further requires the Board to review these standards after one year, and every five years thereafter.

### Significant Issues

The Board has the authority under the Air Quality Control Act to prescribe state ambient air quality standards different, and more stringent, than national ambient air quality standards (NAAQS).<sup>1</sup> Generally, the state regulates six criteria pollutants—sulfur dioxide (SO<sub>2</sub>), total suspended particulate matter (PM), carbon monoxide (CO), nitrogen oxide (NO<sub>2</sub>), hydrogen sulfide (H<sub>2</sub>S), and total reduced sulfur.

Two key differences between current statute and the bill's provisions are the qualification that adopted standards be "sufficient to protect public health" and be based on "air quality criteria issued pursuant to the federal act and the latest scientific knowledge". New Mexico standards are higher for these pollutants; the EPA has no standards for H<sub>2</sub>S and total reduced sulfur. According to NMED, New Mexico's standards are more stringent because they address health concerns, nuisance issues and property damage. The EPA standards are health-based only, which is similar to HB 371. In fact, NMED argues that this shift would limit its rulemaking ability for those criteria pollutants without federal standards.

On the second issue, NMED argues that the bill shifts the burden of proof for regulation changes to the state, who would be required to conduct, or more likely contract for, scientific study of the criteria pollutant in question. The department points out that the EPA spends a minimum of \$1 million for each criteria pollutant for which it creates a standard.

### **FISCAL IMPLICATIONS**

House Bill 371 does not contain an appropriation. Enactment of the bill could have a serious fiscal impact on the Air Quality Bureau of NMED because of the requirement to review the state ambient air quality standards for its six criteria pollutants.

### **OTHER SUBSTANTIVE ISSUES**

NMED has provided a history of state ambient air quality standards:

State ambient air quality standards were first adopted in the early 1970's.

#### *The Basis For Ambient Air Quality Standards*

Ambient air quality standards can be based on:

- The public health impacts on sensitive populations (for example children, and the elderly, pregnant, or infirm);
- Damage caused to crops, animals and the environment, including buildings and structures, due to air pollution;
- Nuisance factors, such as smell and excessive dust;
- The haze created by air pollutants, which obscures the view of our scenic vistas in and outside of our national parks and wilderness areas.

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<sup>1</sup> The federal Clean Air Act (CAA), as amended in 1990, directs the U.S. Environmental Protection Agency (EPA) to identify and set national ambient air quality standards (NAAQS) for pollutants that cause adverse effects to public health and the environment. The law allows individual states to have stronger pollution controls, but states are not allowed to have weaker pollution controls than those set for the whole country.

- Some pollutants for which air quality standards are set also contribute to the formation of other pollutants, such as ground-level ozone (the primary component of smog), and/or acid rain.

How Compliance With Ambient Standards Is Evaluated

- Computer models predict the ambient air impacts that may result in an area from specific pollutant emissions in specific locations. Computer modeling to demonstrate compliance with standards is often required for new and modifying facilities seeking an air quality permit.
- NMED operates a system of ambient air quality monitors, which measure the air in populated areas and downwind of large sources of air pollutants. The monitoring system in New Mexico has been established to measure national ambient air quality standards and in many cases does not monitor for New Mexico standards.

What other states have ambient air quality standards in addition to the federal ambient air quality standards?

- At least 29 other states have ambient air quality standards in addition to the federal ambient air quality standards. These states include Alaska, California, Colorado, Montana, North Dakota, Nevada, Oregon, Utah and Wyoming.

What are the New Mexico Ambient Air Quality Standards?

*Total Suspended Particulate (TSP)*

- TSP is all particulate matter (dust) less than or equal to 30 microns in diameter. Federal standards are in place for particulate matter less than or equal to 10 microns (PM-10) and 2.5 microns (PM-2.5). Thus, TSP emissions include as a subset all PM-10 and PM-2.5 emissions.
- The health effects of TSP are predominantly the result of the PM-10 and PM-2.5 fractions, which can be inhaled deeply into the lungs and compromise cardiovascular functioning in humans and animals. The smaller particles may also be carried long distances, contributing to regional haze. The fraction of TSP that consists of particles larger than PM-10 can result in property damage, crop damage, decreased visibility, and nuisance. Blowing dust can also be a safety hazard.
- If not for the TSP NMAAQS, potentially dusty facilities, such as rock crushers and asphalt plants, could locate much nearer to homes and recreational areas. In addition, visibility at New Mexico's scenic vistas could diminish.

*Sulfur Dioxide (SO<sub>2</sub>)*

- The 24-hour and annual average state standards for SO<sub>2</sub> are more stringent than those set federally, except in the area within 3.5 miles of the Chino Mines smelter furnace stack at Hurley. Most SO<sub>2</sub> emitted in New Mexico comes from coal-fired power plants, refineries and copper smelters.

- SO<sub>2</sub> can aggravate and increase the frequency of respiratory illnesses. Sulfates, which are a major cause of haze, are formed in the atmosphere from SO<sub>2</sub> emissions. In addition, SO<sub>2</sub> is the principal cause of acid rain, which damages mountain lakes, soils, crops and forests, and corrodes metals.
- If not for the SO<sub>2</sub> NMAAQs, visibility at New Mexico's scenic vistas could diminish and acid rain could increase.

*Hydrogen Sulfide (H<sub>2</sub>S) and Total Reduced Sulfur (TRS)*

- H<sub>2</sub>S and TRS are most often emitted in New Mexico by oil and gas plants and compressor stations that process or compress "sour" (with a higher sulfur content) natural gas or crude oil. Although there are no federal ambient air quality standards for H<sub>2</sub>S or TRS, they are regulated under the federal Prevention of Significant Deterioration [of air quality] Program, and there are OSHA exposure limits for H<sub>2</sub>S. The state H<sub>2</sub>S standard is somewhat relaxed in the Pecos-Permian area.
- Sulfur compounds, such as H<sub>2</sub>S, are irritants and create nuisance odors when present at low concentrations. At higher concentrations, H<sub>2</sub>S can result in nausea, respiratory damage, and even death. TRS may contribute to acid rain formation, causing damage to crops and forests.
- If not for the H<sub>2</sub>S NMAAQs, the rotten egg smell of hydrogen sulfide in areas surrounding oil and gas facilities would be unregulated and concentrations could be high enough to cause impacts to human health. If not for the TRS NMAAQs, acid rain could increase.

*Carbon Monoxide (CO)*

- Combustion processes, such as fires and fuel burning in engines, produce CO. It is a colorless, odorless gas. However, it can contribute to the formation of ground-level ozone, the primary ingredient of smog. Both state and federal ambient air quality standards have been set for this pollutant.
- At high concentrations, CO is deadly. At lower concentrations, CO can compromise cardio-vascular function in humans and animals. In addition, CO emissions may contribute to global warming.
- If not for the CO NMAAQs, CO concentrations might cause health impacts and reduce visibility at our scenic vistas by contributing to the formation of haze.

*Nitrogen Dioxide (NO<sub>2</sub>)*

- NO<sub>2</sub> is a byproduct of combustion. Engines that are greater than 10-15 years old emit significantly more NO<sub>2</sub> than newer engines, which are more technologically advanced. As a result, new facilities are seldom constrained by this NMAAQs.
- NO<sub>2</sub> can contribute to respiratory illnesses and regional haze, as well as damage

plants, crops and livestock. NO<sub>2</sub> also contributes to the formation of ground-level ozone, which has adverse health effects and damages plants, and to the formation of acid rain, which can damage crops and forests. Both state and federal ambient air quality standards have been set for this pollutant.

- If not for the NO<sub>2</sub> NMAAQS, visibility at New Mexico's scenic vistas could diminish, and acid rain could increase. Damage could also be done to New Mexico's agricultural industries.

**MFV/njw**